701

MATERIAL SAFETY DATA SHEET

Complies with OSHA Hazard Communication Standard 29 CFR 1910.1200

Date of Prep: 07/22/02

SECTION 1

SUNNYSIDE CORPORATION
225 CARPENTER AVENUE
WHEELING, ILLINOIS 60090 (847) 541-5700 - SUNNYSIDE CORPORATION
EMERGENCY TELEPHONE (800) 424-9300 - CHEM TREC

FOR INFORMATION: (847) 541-5700

Product Class: Petroleum Hydrocarbon

Manufacturer's Code: 701

Trade Name: SUNNYSIDE PAINT THINNER (Plastic container)

NPCA HMIS: Health: 1
Fire: 2
Reactivity: 0

Product Appearance and Odor: Clear, water-white liquid; petroleum odor.

SECTION 2 -- HAZARDOUS INGREDIENTS

OCCUPATIONAL EXPOSURE LIMITS

INGREDIENT	CAS #	PERCENT	ACGIH TLV (TWA)	ACGIH TLV (STEL)	OSHA PEL (TWA)	OSHA PEL (STEL)	VAPOR PRESSURE
Mineral Spirits	64742-88-7		100 ppm (for Stoddard solvent CAS# 8032-41-3		500 ppm		2.0mm Hg@20°C
Heavy Hydrotreated Naphtha (petroleum)	64742-48-9		Not est.		Not est.		Not known
Heavy Hydrodesulfurized Naphtha (petroleum)	64742-82-1		Not est.		Not est.		Not known
Nonanes	mixture		200 ppm		200 ppm		Not known
Trimethyl Benzenes	25551-13-7		25 ppm		25 ppm		Not known
1, 2, 4 – Trimethyl Benzene	95-63-6		Not est.		Not est.		Not known

SECTION 3 -- EMERGENCY AND FIRST AID PROCEDURES

Inhalation: Remove victim to fresh air and if breathing is difficult, oxygen should be provided by qualified personnel. Give artificial respiration if not breathing. Get medical attention immediately.

Eye Contact: Flush eyes with plenty of water for 15 minutes while holding eyelids open. Get medical attention immediately.

Skin contact: Remove contaminated shoes and clothing. Flush skin with water. Follow by washing with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned.

Ingestion: Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of luquid into the lungs. Never give anything by mouth to a person who is not fully conscious. Do not leave victim unattended. Seek medical attention immediately.

SECTION 4 -- PHYSICAL DATA

The following data represent approximate or typical values. They do not constitute product specifications.

Boiling Range: 300-400° (F)

Vapor Density: Heavier than air

Evaporation Rate: Slower than ether

% Volatile By Volume: Approx. 100%

Weight Per Gallon: 6.52 lbs.

Solubility in Water: Negligible; less than 0.1%

SECTION 5 -- FIRE AND EXPLOSION DATA

Flammability Classification:	Combustible Liquid - Class II.
Flash Point:	107^{O}(F) Tag. Closed cup
Autoignition Temperature:	445°F
Lower Explosive Limit:	0.9%
Extinguishing Media:	Carbon dioxide, foam, dry chemical, water spray. Do not use direct water stream; it will spread fire.
Unusual Fire and Explosion Hazards:	Do not store or mix with strong oxidants.
Special Fire Fighting Procedures:	Use air-supplied rescue equipment for enclosed areas. Cool exposed containers with water.

SECTION 6 -- HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE:	See Section 2.
EFFECTS OF OVEREXPOSURE	
Acute	
Eye Contact:	May cause irritation, discomfort, redness and swelling of the eye.
Skin Contact:	Liquid is slightly irritating to the skin. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis.
Inhalation:	Vapors may cause irritation to nose, throat and respiratory tract. Breathing of high vapor concentrations may result in headaches, dizziness and other signs of nervous system depression. These effects have been observed after misuse or abuse of this product. When used in reasonable and foreseeable manner, no adverse effects are anticipated form exposure to this product.
Ingestion:	Ingestion may result in vomiting, aspiration (breathing) of vomitus into the lungs must be avoided as even small quantities may result in aspiration pneumonitis.
Chronic:	Repeated skin contact may aggravate an existing dermatitis (skin condition).
Medical Conditions Aggravated by Exposure:	Conditions aggravated by exposure may include skin disorders and respiratory (asthma-like) disorders.
Carcinogenicity:	This product has not been identified as a carcinogen by OSHA, IARC, or NTP

SECTION 7 -- REACTIVITY DATA

Stability:	Stable
Conditions to Avoid:	Heat, sparks and flame.
Incompatibility (Materials to Avoid):	Strong oxidizing agents like liquid chlorine or concentrated oxygen.
Hazardous Decomposition Products:	Thermal decomposition may yield carbon dioxide and carbon monoxide.
Hazardous Polymerization:	Will not occur.

SECTION 8 -- SPILL OR LEAK PROCEDURES

Steps to be taken in case material is spilled or released: Remove ignition sources, evacuate area, avoid breathing vapor or contact with liquid. Recover free liquid or stop leak if possible. Dike large spills and use absorbent material for small spills. Keep spilled material out of sewers, ditches and bodies of water.

Waste disposal method: Incinerate under safe conditions; dispose of in accordance with local, state and federal regulations.

SECTION 9 -- SAFE HANDLING AND USE INFORMATION

Respiratory Protection:	Appropriate vapor canister, self-contained breathing apparatus or supplied-air hose mask, if needed.
Ventilation:	Sufficient, in volume and pattern, to keep workroom concentration below current applicable OSHA safety and health requirements. See Section 2. Use explosion-proof equipment. No smoking.
Protective Gloves:	Rubber or neoprene.
Eye Protection:	Chemical safety goggles.
Other Protective Equipment:	Impervious clothing or boots, if needed.
General Comments:	Warning! Odor is an inadequate warning for hazardous conditions. This product is sometimes used as a dry-cleaning solvent. Retained solvent present in absorbent clothing (e.g., shoulder pads, leather belts or straps, etc.) which remains in contact with the skins for prolonged periods has caused severe skin irritation including redness, burns, and severe tissue damage. Care must be taken to ensure that garments are completely dry before being worn.

SECTION 10 -- SPECIAL PRECAUTIONS

Dept. of Labor Storage Category:	Combustible Liquid - Class II
Hygienic Practices:	Keep away from heat, sparks and open flame. Keep containers closed when not in use. Avoid eye contact. Avoid prolonged or repeated contact with skin. Wash skin with soap and water after contact.
Additional Precautions:	Ground containers when transferring liquid to prevent static accumulation and discharge. Additional information regarding safe handling of products with static accumulation potential can be ordered by contacting the American Petroleum Institute (API) for API Recommended Practice 2003, entitled “Protection Against Ignitions Arising Out of Static, Lighting, and Stray Currents” (American petroleum Institute, 1720 L Street Northwest, Washing, DC 20005), or the National Fire Protection Association (NFPA) for NFPA 77 entitled “Static Electricity” (National Fire Protection Association, 1 Battermarch Park, P.O. Box 9101, Quincy, MA 02269-9109.
Empty Container Warning:	"Empty" containers retain residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks or other sources of ignition; they may explode and cause injury or death. Do not attempt to clean since residue is difficult to remove. "Empty" drums should be completely drained, properly bunged and promptly returned to supplier or disposed of in an environmentally safe manner and in accordance with governmental regulations.

SECTION 11 -- ADDITIONAL INFORMATION

This product contains the following toxic chemical(s) which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

TOXIC CHEMICAL	CAS #	APPROXIMATE % BY WEIGHT
1, 2, 4 – Trimethyl Benzene	95-63-6	0.5 to 1.5%

SARA Title III Hazard Categories:	Immediate (Acute) Health, Delayed (Chronic) Health
Common Names:	Solvent Naphtha (Petroleum), Aliphatic Hydrocarbon, Petroleum Distillate
California Proposition 65:	This product contains trace amounts of Benzene, a chemical known to the State of California to cause cancer, and Toluene, a chemical known to the State of California to cause birth defects or other reproductive harm.

TRANSPORTATION (US DOT land transportation in packages of 119 gallons or less)

Not regulated as a hazardous material.

Refer to 49 CFR for additional information.

Q340

Bowl, Tile & Grout Cleaner

The Original Water-Soluble Liquid Packet™

* U.S. Patent Nos. 6,037,319; 6,136,776

- ***Easy to use • No spills • No waste***
- ***Saves space, time and money • Provides job site portion control***
- ***Reduces costly employee training • Entire PAK-IT™ dissolves easily in water***
- ***Significant environmental source reduction***

DESCRIPTION

A blend of natural mild acids and degreasers formulated to tackle the toughest tile and grout cleaning jobs.
Removes:
Soap Scum, Body Oils, Mineral Deposits, Mold and Mildew
From:
Shower walls, Wash Basins, Tub Surfaces, Restroom Tiles and Floors, Ceramic, Plastic, Porcelain, Chrome and Stainless Steel

PACKAGING

Jumbo-Pak

Product is shipped in an outer carton which contains four **Jumbo-Pak** containers.
Each container holds 90x15 gram water-soluble packets.
Single-shipper carton also available.

Mini-Pak

Product is shipped in an outer carton which contains two **Mini-Pak** containers.
Each container holds 20x15 gram water-soluble packets.

Mixing is as easy as...

DIRECTIONS

- Add one **PAK-IT** to one quart of warm water. Shake to mix.
- Spray on surface to be cleaned.
- Agitate if necessary.
- Wipe off excess product with a clean, dry paper towel or lint-free cloth.
- For heavier accumulations of dirt, grease and grime, use two **PAK-ITS** per quart.

CAUTION

Do not handle **PAK-IT** with wet hands. Do not remove **PAK-IT** from container prior to use. Store in a cool, dry place.

Technical Data

Solubility in Water	***Complete***
pH at Use Dilution	***2.0-3.0***
Color	***Pink***
Fragrance	***Melon***
Phosphates	***None***
Biodegradability	***Complete***

Another innovative product from
DCL SOLUTIONS
Philadelphia, PA 19124 ❖ 800-426-1127
www.pakit.com

The Original Water-Soluble Liquid Packet™
PAK-IT™
A full line of innovative cleaning products for simplified sanitary maintenance

MATERIAL SAFETY DATA SHEET Bowl, Tile & Grout Cleaner • Concentrate & Use Dilution

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER/DISTRIBUTOR: DCL Solutions
ADDRESS: 4201 Torresdale Avenue P.O. Box 9523 Philadelphia, PA 19124
EMERGENCY TELEPHONE NUMBER: 215-830-0722
CHEMICAL NAME AND SYNONYMS: N/A proprietary blend
TRADE NAME: Bowl, Tile & Grout Cleaner Q340
CHEMICAL FAMILY: blended synthetic detergents and organic acid
FORMULA: N/A blended product

2. COMPOSITION/INFORMATION ON INGREDIENTS

	% CONCENTRATION (RANGE)	HAZARD RATINGS (TLV/PEL)
Proprietary blend of surfactants and related materials (CAS# not est.)	100.0	not est.

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200): Exposure Limits 8hrs.TWA (ppm)

COMPONENT	HAZARD	OSHA STEL	OSHA PEL	ACGIH TLV	SUPPLIER
NONE PER 29 CFR 1910.1200	N.A.	N.A.	N.A.	N.A.	N.A.

3. HAZARD IDENTIFICATION:

HMIS HAZARD CODE: HEALTH: 1 FLAMMABILITY: 1 REACTIVITY: 0 OTHER: None
EMERGENCY OVERVIEW: CONCENTRATE MAY CAUSE IRRITATION TO SKIN AND EYES. IF INGESTED MAY CAUSE SEVERE GASTRIC DISTRESS
POTENTIAL HEALTH EFFECTS:
INHALATION: NOT CONSIDERED A HAZARDOUS ROUTE OF EXPOSURE
EYE CONTACT: MAY CAUSE IRRITATION
SKIN CONTACT: MAY CAUSE IRRITATION
INGESTION: MAY CAUSE GASTRIC DISTRESS
POTENTIAL HEALTH EFFECTS:
TARGET ORGANS: NONE KNOWN
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: NONE KNOWN
CHRONIC: NONE KNOWN

4. FIRST AID MEASURES

INHALATION: NOT CONSIDERED A HAZARDOUS ROUTE OF EXPOSURE.
EYE CONTACT: IMMEDIATELY FLUSH WITH CLEAR WATER FOR AT LEAST 15 MIN. GET MEDICAL ADVICE.
SKIN CONTACT: REMOVE CONTAMINATED CLOTHING AND SHOES. THOROUGHLY WASH AFFECTED AREA WITH WATER. IF IRRITATION PERSISTS GET MEDICAL AID.
INGESTION: DO NOT INDUCE VOMITING. GET MEDICAL AID.
NOTES TO PHYSICIAN: NOT A SYSTEMIC POISON. TREAT SYMPTOMATICALLY.

5. FIRE FIGHTING MEASURES:

Flashpoint (oF) and Method:145 TCC Autoignition Temperature (oF): not est.
FLAMMABLE LIMITS:
GENERAL HAZARD: HEATED MATERIAL MAY COMBUST.
FIRE FIGHTING INSTRUCTIONS: NONE
FIRE FIGHTING EQUIPMENT: WEAR FULL TURN OUT GEAR AND SELF CONTAINED BREATHING APPARATUS.
EXTINGUISHING MEDIA: Foam, CO_2, Dry Chemical, Water, Other: NONE
HAZARDOUS COMBUSTION PRODUCTS: MOSTLY CARBON OXIDES
NATIONAL FIRE PROTECTION ASSOCIATION:
NFPA Hazard Rating: 0-Insignificant 1-Slight 2-Moderate 3-High 4-Extreme
U-Unknown *-No Information
SPECIAL INFORMATION: NONE

6. ACCIDENTAL RELEASE MEASUERS:

LAND SPILL: NOT CONSIDERED AN ENVIRONMENTAL HAZARD.
WATER SPILL: FOLLOW LOCAL,STATE AND FEDERAL GUIDELINES. NOT CONSIDERED A MARINE POLLUTANT.

7. HANDLING AND STORAGE

STORAGE TEMPERATURE: 34 TO 120 F, STORAGE PRESSURE: ATMOSPHERIC
GENERAL: KEEP OUT OF REACH OF CHILDREN

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

ENGINEERING CONTROLS: NONE REQUIRED
PERSONAL PROTECTION:
RESPIRATOR: NOT REQUIRED
PROTECTIVE CLOTHING: NOT REQUIRED

9. PHYSICAL DATA

BOILING POINT (F): Not est. SPECIFIC GRAVITY: 1.017 (on dilution ≈ 1.0)
VAPOR PRESSURE (mm Hg): Not est. % VOLATILES BY WEIGHT: <10 (on dilution < 1.0)
VAPOR DENSITY(Air=1): Not est. EVAPORATION RATE (BuAc=1): Not est.
FREEZING POINT (oF): Not est. SOLUBILITY IN WATER: Complete
pH: on dilution 2.0-3.0 APPEARANCE: Thin, clear, pink PHYSICAL STATE: LIQUID
ODOR: Fragranced
DATE PREPARED: 11-3-06 BY: IB
NOTE: Not Est. = Not Established Prop. = Proprietary

10. STABILITY AND REACTIVITY

GENERAL: STABLE
INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID: STRONG OXIDIZERS
HAZARDOUS DECOMPOSITION: MOSTLY CARBON OXIDES

11. TOXICOLOGICAL INFORMATION:

NOT ESTABLISHED FOR MIXTURE
CARCINOGENIC INFORMATION CAS# N.A., %Wt: N.A., IARC:, N.A.
NTP: N.A., ACGIH1: N.A., ACGIH 2: N.A., OTHER: NONE

12. ECOLOGICAL INFORMATION:

NOT CONSIDERED TO BE A POLLUTANT

13. DISPOSAL CONSIDERATION

RCRA HAZARD CLASS:N.A.

14. TRANSPORT INFORMATION:

DOT (Department of Transportation)
Proper Shipping Name: COMPOUND CLEANING LIQUID, N.O.S.
Hazard Class: Not regulated
Identification Number: NA

15. REGULATORY INFORMATION:

TSCA (Toxic Substance Control Act): N.A.
CERCLA (Comprehensive Environmental Response Compensation and Liability Act):N.A.
SARA TITLE III (Superfund Amendments and Reauthorization Act): 311/312
Hazard Catagories: N.A.
SARA TITLE III (Superfund Amendments and Reauthorization Act): 313
Reportable Ingredients: N.A.
CALIFORNIA PROPOSITION 65: NO

16. OTHER INFORMATION:

NONE
REFERENCES: N.A.

THE INFORMATION CONTAINED IN THIS MSDS WAS OBTAINED FROM CURRENT AND RELIABLE SOURCES, HOWEVER THE DATA IS PROVIDED WITHOUT ANY WARRANTY, EXPRESSED OR IMPLIED, REGARDING ITS CORRECTNESS OR ACCURACY. SINCE THE CONDITIONS OF HANDLING, STORAGE AND DISPOSAL OF THIS PRODUCT ARE BEYOND THE CONTROL OF THIS COMPANY, IT IS NOT RESPONSIBLE FOR LOSS, INJURY AND EXPENSE ARISING OUT OF THE PRODUCT'S IMPROPER USE. NO WARRANTY, EXPRESSED OR INFERRED, REGARDING THE PRODUCT DESCRIBED IN THIS MSDS SHALL BE CREATED OR INFERRED BY ANY STATEMENT IN THIS MSDS. VARIOUS GOVERNMENT AGENCIES MAY HAVE SPECIFIC REGULATIONS REGARDING THE TRANSPORTATION, HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT WHICH MAY NOT BE COVERED BY THIS MSDS. THE USER IS RESPONSIBLE FOR FULL COMPLIANCE.

Safety Data Sheet: PAN MATE (SMALL), MM

Supercedes Date 01/25/2011 **Issuing Date** 08/08/2013

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name PAN MATE (SMALL), MM
Recommended use Flow improver Rust and Corrosion inhibitor
Information on Manufacturer
CERTIFIED LABS, DIV. OF NCH CORP.

BOX 152170
IRVING, TEXAS 75015

Product Code 4790
Chemical nature solid mixture of Ammonium salts
Emergency Telephone Number
CHEMTREC® 800-424-9300
Telephone inquiry
972-579-2477

2. HAZARD IDENTIFICATION

Color light green **Physical State** Solid **Odor** Sweet

GHS
Classification
Physical Hazards
None
Health Hazard

Acute Oral Toxicity	Category 4
Skin Corrosion/Irritation	Category 1
Serious Eye Damage/Eye Irritation	Category 1

Other hazards
None

Labeling
Signal Word
DANGER

Hazard Statements
H314 - Causes severe skin burns and eye damage
H302 - Harmful if swallowed

Precautionary Statements
P280 - Wear protective gloves, protective clothing, eye protection and face protection.
P270 - Do not eat, drink or smoke when using this product
P262 - Do not get in eyes, on skin, or on clothing
P264 - Wash face, hands and any exposed skin thoroughly after handling.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower
P333 + P313 - If skin irritation or rash occurs, get medical attention
P363 - Wash contaminated clothing before reuse
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists, get medical attention.
P301+ P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a physician if unwell.
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P501 - Dispose of contents and container in accordance with applicable regulations.

4 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Sodium metasilicate	6834-92-0	30-60
N-(2-hydroxyethyl)-dodecanamide	142-78-9	30-60
Stearic acid	57-11-4	7-13
Benzenemethanaminium, N,N-dimethyl-N-tetradecyl-, chloride	139-08-2	7-13
Polydimethylsiloxane	63148-62-9	1-5
Alcohols, C9-11, ethoxylated	68439-46-3	1-5
2-Heptadecenyl-4,4(5H)-oxazoledimethanol	28984-69-2	1-5

4. FIRST AID MEASURES

General advice Do not get in eyes, on skin or on clothing.
Eye Contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately.
Skin Contact Wipe up with absorbent material (e.g. cloth, fleece). Wash off with soap and plenty of water. Get medical attention if irritation develops and persists. Wash contaminated clothing before re-use.
Inhalation If inhaled, remove to fresh air. Get medical attention if symptoms occur.
Ingestion Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention if symptoms occur.
Notes to physician The product causes burns of eyes, skin and mucous membranes. Control of circulatory system, shock therapy if needed.

5. FIRE-FIGHTING MEASURES

Flash Point Does not flash **Method** Not applicable
Flammability Limits in Air % Dust explosion properties. **Upper** No data available **Lower** No data available
Suitable Extinguishing Media
Water spray. Foam. Carbon dioxide (CO2). Dry chemical. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Specific hazards arising from the chemical
Dust can form an explosive mixture in air.
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

NFPA	**Health** 3	**Flammability** 1	**Instability** 0
HMIS	**Health** 3	**Flammability** 1	**Instability** 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
Environmental Precautions No special environmental precautions required.
Methods for Containment Cover powder spill with plastic sheet or tarp to minimize spreading.
Methods for Cleaning Up Pick up and arrange disposal without creating dust.
Neutralizing Agent Acetic acid, diluted.

7. HANDLING AND STORAGE

Handling Do not get in eyes, on skin or on clothing.
Storage Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place.
Storage Temperature **Minimum** 35 °F / 2 °C **Maximum** 120 °F / 49 °C
Storage Conditions **Indoor** X **Outdoor** **Heated** **Refrigerated**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Sodium metasilicate	No data available	No data available	No data available
N-(2-hydroxyethyl)-dodecanamide	No data available	No data available	No data available
Stearic acid	No data available	No data available	No data available
Benzenemethanaminium, N,N-dimethyl-N-tetradecyl-, chloride	No data available	No data available	No data available
Polydimethylsiloxane	No data available	No data available	No data available
Alcohols, C9-11, ethoxylated	No data available	No data available	No data available
2-Heptadecenyl-4,4(5H)-oxazoledimethanol	No data available	No data available	No data available

Engineering Measures Ensure adequate ventilation, especially in confined areas.
Personal Protective Equipment
Eye/Face Protection Tightly fitting safety goggles. Face-shield.
Skin Protection Wear suitable protective clothing, Impervious gloves.
Respiratory Protection In case of insufficient ventilation wear suitable respiratory equipment. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
General Hygiene Considerations Wear protective gloves/clothing. Ensure that eyewash stations and safety showers are close to the workstation location. Do not eat, drink or smoke when using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid	**Viscosity**	Solid
Color	light green	**Odor**	Sweet
Odor Threshold	Not applicable	**Appearance**	Opaque
pH	(as 1% solution) 12.6	**Specific Gravity**	1.4
Bulk Density (lb/cu ft)	106.1	**Evaporation Rate**	0 (Butyl acetate=1)
Percent Volatile (Volume)	>0.8	**VOC Content (%)**	0.8
VOC Content (g/L)	8	**Vapor Pressure**	0.04 mmHg @ 70°F
Vapor Density	7.1 (Air = 1.0)	**Solubility**	Moderately soluble
n-Octanol/Water Partition	No data available	**Melting Point/Range**	No data available
Decomposition Temperature	No data available	**Boiling Point/Range**	No data available
Flammability (solid, gas)	No data available		
Flash Point	Does not flash	**Method**	Not applicable
Autoignition Temperature	No information available.		
Flammability Limits in Air %	Dust explosion properties.	**Upper** No data available **Lower** No data available	

10. STABILITY AND REACTIVITY

Chemical Stability	Stable. Hazardous polymerization does not occur.
Conditions to Avoid	None known
Incompatible Products	Strong oxidizing agents, Reducing agents, Anionic surfactants.
Hazardous Decomposition Products	Oxides of Carbon, Nitrogen, and Sulfur, Hydrogen chloride gas, Hydrogen, by reaction with metals, Formaldehyde.
Possibility of Hazardous Reactions	None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information

The following values are calculated based on chapter 3.1 of the GHS document (Rev. 3, 2009):

Oral LD50	No information available
Dermal LD50	No information available
Inhalation LC50	
Gas	No information available
Mist	No information available
Vapor	No information available
Principle Route of Exposure	Skin contact, Eye contact.
Primary Routes of Entry	None known
Acute Effects	
Eyes	Corrosive to the eyes and may cause severe damage including blindness.
Skin	Causes skin burns.
Inhalation	Low hazard for usual industrial or commercial handling.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.
Chronic Toxicity	None known.
Target Organ Effects	None known
Aggravated Medical Conditions	Skin disorders

Component Information

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Sodium metasilicate	= 600 mg/kg (Rat)	no data available	no data available	no data available	no data available
N-(2-hydroxyethyl)-dodecanamide	no data available	no data available	no data available	no data available	no data available
Stearic acid	no data available	no data available	no data available	no data available	no data available
Benzenemethanaminium, N,N-dimethyl-N-tetradecyl-, chloride	no data available	no data available	no data available	no data available	no data available
Polydimethylsiloxane	no data available	no data available	no data available	no data available	no data available
Alcohols, C9-11, ethoxylated	no data available	no data available	no data available	no data available	no data available
2-Heptadecenyl-4,4(5H)-oxazoledimethanol	no data available	no data available	no data available	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Sodium metasilicate	no data available	no data available	no data available	no data available	no data available
N-(2-hydroxyethyl)-dodecanamide	no data available	no data available	no data available	no data available	no data available
Stearic acid	no data available	no data available	no data available	no data available	no data available
Benzenemethanaminium, N,N-dimethyl-N-tetradecyl-, chloride	no data available	no data available	no data available	no data available	no data available

Polydimethylsiloxane	no data available	no data available	no data available	no data available	no data available
Alcohols, C9-11, ethoxylated	no data available	no data available	no data available	no data available	no data available
2-Heptadecenyl-4,4(5H)-oxazoledimethanol	no data available	no data available	no data available	no data available	no data available

Carcinogenicity There are no known carcinogenic chemicals in this product.

Component	ACGIH	IARC	NTP	OSHA	Other
Sodium metasilicate	not applicable	not applicable	not applicable	not applicable	not applicable
N-(2-hydroxyethyl)-dodecanamide	not applicable	not applicable	not applicable	not applicable	not applicable
Stearic acid	not applicable	not applicable	not applicable	not applicable	not applicable
Benzenemethanaminium, N,N-dimethyl-N-tetradecyl-, chloride	not applicable	not applicable	not applicable	not applicable	not applicable
Polydimethylsiloxane	not applicable	not applicable	not applicable	not applicable	not applicable
Alcohols, C9-11, ethoxylated	not applicable	not applicable	not applicable	not applicable	not applicable
2-Heptadecenyl-4,4(5H)-oxazoledimethanol	not applicable	not applicable	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information No information available.

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Sodium metasilicate	no data available	LC50 = 210 mg/L Brachydanio rerio 96 h	no data available	EC50= 216 mg/L 96 h	N/A
N-(2-hydroxyethyl)-dodecanamide	no data available	no data available	no data available	no data available	N/A
Stearic acid	no data available	no data available	no data available	no data available	N/A
Benzenemethanaminium, N,N-dimethyl-N-tetradecyl-, chloride	no data available	no data available	no data available	no data available	N/A
Polydimethylsiloxane	no data available	no data available	no data available	no data available	N/A
Alcohols, C9-11, ethoxylated	no data available	no data available	no data available	no data available	N/A
2-Heptadecenyl-4,4(5H)-oxazoledimethanol	no data available	no data available	no data available	no data available	N/A

Persistence and Degradability No information available.
Bioaccumulation No information available.
Mobility No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal Dispose of in accordance with local regulations.
Container Disposal Empty containers should be taken for local recycling, recovery, or waste disposal.

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

ICAO Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

Inventories
TSCA Complies
DSL Complies
U.S. Federal Regulations
SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	No	No	No	No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Sodium metasilicate	Not applicable	Not applicable
N-(2-hydroxyethyl)-dodecanamide	Not applicable	Not applicable
Stearic acid	Not applicable	Not applicable
Benzenemethanaminium, N,N-dimethyl-N-tetradecyl-, chloride	Not applicable	Not applicable
Polydimethylsiloxane	Not applicable	Not applicable
Alcohols, C9-11, ethoxylated	Not applicable	Not applicable
2-Heptadecenyl-4,4(5H)-oxazoledimethanol	Not applicable	Not applicable

16. OTHER INFORMATION

Prepared By Devon Kebodeaux
Supercedes Date 01/25/2011
Issuing Date 08/08/2013
Reason for Revision No information available.
Glossary No information available.
List of References. No information available.

CERTIFIED LABS, DIV. OF NCH CORP.assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage or disposal of the product. The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 574.00

Revision Date: January 16, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Pancreatin

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **N/A**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

Product should be treated as a chemical and is not for consumption as it has been stored with other nonfood-grade chemicals.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Pancreatin (source: porcine pancreas)	8049-47-6	Unspecified	Unspecified	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, amines and amides.
Keep refrigerated 2-8°C.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Yellowish, amorphous powder. Sour malt odor.
Soluble: Water. Insoluble in alcohol.

Not for human consumption.

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Good, only if kept refrigerated.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: January 16, 2014

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Material Safety Data Sheet

WHMIS (Pictograms)	WHMIS (Classification)	Personal protective equipment
	Class D-2A: Material causing other toxic effects (Very toxic).	

Section 1. Product and Company Identification

Product name / Trade name	Universal Antifreeze/ Coolant	**Associated Product's Item Code**	36-244PPEXP
Synonym	Not available.	**CAS #**	Not applicable.
Chemical family	Glycol.	**Validation date**	Mar. 09 2010
Chemical formula	Not applicable.	**Print date**	Mar. 11 2010
Manufacturer	Recochem Inc. 850 Montee de Liesse Montreal, Quebec H4T 1P4 (514) 341-3550 www.recochem.com	**In case of emergency**	Recochem Inc. Communications and Regulatory Affairs Department (905) 878-5544
Material uses	Industrial applications: Coolant and antifreeze formulations.		

Section 2. Hazards identification

Emergency Overview	MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. May cause target organ damage, based on animal data.
Potential Acute Health Effects	**See section 11 for more detailed information on health effects and symptoms.** Toxic by ingestion. May cause abdominal discomfort or pain, nausea, vomiting, dizziness, central nervous system effects and coma. Cardiac failure, pulmonary edema and severe kidney damage may develop. May cause mild eye irritation. May cause mild skin irritation. Unlikely to be inhaled because of physical characteristics, however, heated material may produce vapours, which may cause irritation to lungs if inhaled excessively. Inhalation, particularly of mist, may cause irritation of the nose and throat with headache. High vapour concentrations may produce nausea, vomiting, headache, dizziness and irregular eye movement.
Note to Physician	The signs and symptoms in ethylene glycol poisoning are those of metabolic acidosis, central nervous system depression and kidney injury. Clinical chemistry may reveal anion-gap metabolic acidosis and uremia. Treatment with ethanol to inhibit the metabolism of glycol to oxalate.Early administration of ethanol may counter the toxic effects of ethylene glycol (cardiopulmonary effects attributed to metabolic acidosis and renal damage). Hemodialysis or peritoneal dialysis have been of benefit Pre-existing respiratory and skin disorders may be aggravated by over-exposure to this product. Treat symptomatically and supportively.

Continued on next page

Section 3. Composition, information on ingredients

Canada

Name	CAS number	%
ethanediol	107-21-1	90 - 99

There are no ingredients or additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Section 4. First aid measures

Eye contact	Immediately flush eyes with plenty of water for at least 60 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Skin contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Inhalation	Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Ingestion	Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Notes to physician	See section 2 Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Section 5. Fire fighting measures

Products of combustion	Decomposition products may include the following materials: carbon oxides
Fire-fighting media and instructions	Use an extinguishing agent suitable for the surrounding fire.
Fire Hazards	Emits acrid smoke and irritating fumes when heated to decomposition.May be combustible at high temperature.
Explosion Hazards	Not a product presenting risks of explosion.

Continued on next page

Section 6. Accidental release measures

Small spill and leak	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large spill and leak	Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Section 7. Handling and Storage

Handling	Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Storage	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls, personal protection

Engineering controls	No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.
Personal protection	
Eyes	Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Recommended: splash goggles
Body	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Hands	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. >8 hours (breakthrough time): nitrile rubber

Product name	**Exposure limits**
Canada	
ethanediol	**ACGIH (Canada, 2003).** CEIL: 100 mg/m³ **CA Alberta Provincial (Canada, 10/2006).** 15 min OEL: 100 mg/m³ 15 minute(s). Form: aerosol **CA British Columbia Provincial (Canada, 7/2007).** STEL: 100 mg/m³ 15 minute(s). Form: Aerosol TWA: 10 mg/m³ 8 hour(s). Form: Particulate

Continued on next page

STEL: 20 mg/m³ 15 minute(s). Form: Particulate
STEL: 50 ppm 15 minute(s). Form: Vapour

CA Ontario Provincial (Canada, 3/2007).
CEV: 100 mg/m³

CA Quebec Provincial (Canada, 12/2006).
STEV: 50 ppm 15 minute(s). Form: vapour and mist
STEV: 127 mg/m³ 15 minute(s). Form: vapour and mist

United States

ethanediol

ACGIH TLV (United States, 1/2007).
C: 100 mg/m³ Form: Aerosol

OSHA PEL 1989 (United States, 3/1989).
CEIL: 50 ppm
CEIL: 125 mg/m³

Section 9. Physical and chemical properties

Physical State and Appearance	Clear viscous liquid.	**Odour**	Odourless.
Molecular weight	62.07 g/mole	**Taste**	Sweet.
pH	Not available.	**Colour**	Green.
Boiling/condensation point	197°C (386.6°F)	**Volatility**	0% (w/w).
Melting/freezing point	-13°C (8.6°F)	**Evaporation rate**	0.01 compared to Butyl acetate.
Relative density	1.12 to 1.15	**Odour Threshold**	Not available.
Vapour Pressure	0.06 mm of Hg (@ 20°C)	**Viscosity**	Not available.
Vapour Density	2.1 (Air = 1)	**Solubility**	Soluble in water, methanol, diethyl ether.
VOC Content	1115 (g/l).	**Other Properties**	Not available.

The product is:	May be combustible at high temperature.
Auto-ignition temperature	400°C (752°F)
Flash Point	Values for 100% EG Closed cup: 116°C (240.8°F) [Tagliabue.] Open cup: 115.6°C (240.1°F) [Cleveland]
Flammable limits	Lower: 3.2% Upper: 15.3%
Fire hazards in the presence of various substances	Non-flammable in the presence of the following materials or conditions: open flames, sparks and static discharge, heat and shocks and mechanical impacts

Continued on next page

Section 10. Stability and reactivity

Stability	The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions of instability	No additional remark.
Incompatibility with various substances	Reactive with oxidizing agents, acids, alkalis.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological Information

Canada

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
ethanediol	LD50 Dermal	Rabbit	9500 mg/kg	-
	LD50 Dermal	Rabbit	9530 uL/kg	-
	LD50 Intraperitoneal	Rat	5010 mg/kg	-
	LD50 Intravenous	Rat	3260 mg/kg	-
	LD50 Oral	Rat	4700 mg/kg	-
	LD50 Oral	Rat	4000 mg/kg	-
	LD50 Subcutaneous	Rat	2800 mg/kg	-
	LD50 Unreported	Rat	13 g/kg	-
	LDLo Intramuscular	Rat	3300 mg/kg	-
	LDLo Intravenous	Rat	2800 mg/kg	-
	LDLo Intramuscular	Rat	3300 mg/kg	-
	TDLo Oral	Rat	1110 mg/kg	-
	TDLo Oral	Rat	5000 mg/kg	-
	TDLo Oral	Rat	120 mg/kg	-
	TDLo Oral	Rat	1000 mg/kg	-
	TDLo Subcutaneous	Rat	3000 mg/kg	-

Conclusion/Summary : Toxic for humans or animal life.

Chronic toxicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Exposure can cause dermatitis.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
ethanediol	A4	-	-	-	-	-

Mutagenicity

Conclusion/Summary : Not available.

Continued on next page

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Section 12. Ecological information

For accidental discharges into the environment, see Section 6:"Accidental Release Measures" for suggested instructions.

Environmental effects : This product shows a low bioaccumulation potential.

Canada

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
ethanediol	Daphnia.	Acute EC50 >100 mg/L	Daphnia	4 hours
	Algae.	Acute IC50 >100 mg/L	Algae	1 hours
	Fish.	Acute LC50 >100 mg/L	Fish	24 hours
	-	Acute LC50 27540 mg/L Fresh water	Fish - Lepomis macrochirus	96 hours
	-	Acute LC50 >100 ml/L Fresh water	Fish - Lepomis macrochirus	96 hours
	-	Acute LC50 41 to 47 ml/L Fresh water	Fish - Oncorhynchus mykiss	96 hours
	-	Acute LC50 16 to 18 ml/L Fresh water	Fish - Oncorhynchus mykiss	96 hours
	-	Acute LC50 >18500 mg/L Fresh water	Fish - Oncorhynchus mykiss	96 hours
	-	Acute LC50 10500000 to 12700000 ug/L Fresh water	Daphnia - Ceriodaphnia dubia	48 hours
	-	Acute LC50 10000000 to 12300000 ug/L Fresh water	Daphnia - Ceriodaphnia dubia	48 hours
	-	Acute LC50 >10000000 ug/L Fresh water	Fish - Pimephales promelas	96 hours
	-	Acute LC50 >10000000 ug/L Fresh water	Daphnia - Daphnia magna	48 hours
	-	Acute LC50 8050000 ug/L	Fish - Pimephales promelas	96 hours

Continued on next page

	Fresh water		
-	Acute LC50 6900000 to 8800000 ug/L Fresh water	Daphnia - Ceriodaphnia dubia	48 hours
-	Acute LC50 49000000 to 60000000 ug/L Fresh water	Fish - Pimephales promelas	96 hours
-	Acute LC50 22600000 to 26500000 ug/L Fresh water	Daphnia - Ceriodaphnia dubia	48 hours
-	Acute LC50 25500000 to 29800000 ug/L Fresh water	Daphnia - Ceriodaphnia dubia	48 hours
-	Acute LC50 13900000 to 16600000 ug/L Fresh water	Daphnia - Ceriodaphnia dubia	48 hours
-	Acute LC50 13140000 ug/L Fresh water	Daphnia - Ceriodaphnia dubia	48 hours
-	Chronic NOEC 11610000 ug/L Fresh water	Daphnia - Ceriodaphnia dubia	48 hours
-	Chronic NOEC 24000000 ug/L Fresh water	Daphnia - Ceriodaphnia dubia	48 hours

Conclusion/Summary : Not available.

Biodegradability

Conclusion/Summary : Not available.

Section 13. Disposal considerations

Waste information The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Continued on next page

Section 14. Transport information

Canada TDG Classification	
Class	Not a TDG-controlled material.
Subsidiary class	-
Proper Shipping Name (Canada) TDG	Not applicable.
UN number	Not applicable.
Packing Group	Not applicable.
Special provisions	Not applicable.

No placard (handling and hazard label) required

IMDG Classification	
Class	Not controlled under IMDG.
Subsidiary class	Not applicable.
Proper Shipping Name IMDG	Not applicable.
UN number	Not applicable.
Packing Group	Not applicable.
Marine pollutant	Not a pollutant.
Special provisions	Not applicable.

No placard (handling and hazard label) required

No placard (handling and hazard label) required

United States DOT (Classification)	
Class	Class 9: Miscellaneous hazardous material.
Subsidiary class	-
Proper Shipping Name (United States) DOT	Environmentally hazardous substance, liquid, n.o.s. (Ethylene glycol)
UN number	UN 3082
Packing Group	III
Special provisions	In single containers of 5000 lbs capacity or less this product is exempt from DOT regulations (not regulated). Does not require label or placards. Reportable Quantity (RQ)= 5000 lbs (2268 kg) (as ethylene glycol) For bulk shipments equal to or greater than Reportable Quantity (RQ), please adhere to classification as outlined in DOT Classification section.

International Air Transport Association (IATA)	For air shipment classification and associated regulations, please refer to the latest edition of IATA Dangerous Goods Regulations.

Continued on next page

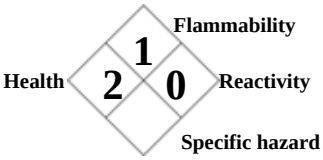
Section 15. Regulatory information

WHMIS Classification (Canada)	Class D-2A: Material causing other toxic effects (Very toxic).
Canada Domestic Substances List (DSL) Status	This product and/ or all of its components are on the DSL.
HCS Classification (U.S.A.)	Target organ effects
U.S.A. Regulatory Lists	This product and/ or all of its components are on the TSCA inventory list.

Hazardous Material Information System (U.S.A.)

Health	2
Flammability	1
Reactivity	0
Personal protection	B

National Fire Protection Association (U.S.A.)



Section 16. Other information

Validated and verified by Compliance and Technical Information Manager on Mar. 09 2010 **ph.# 905-878-5544**

Printed Mar. 11 2010

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

MSDS are available at www.recochem.com

Material Safety Data Sheet

Section 1: Product & Company Identification

Product Name: **Parts Plus Brake Parts Cleaner** (aerosol)

Product Number (s): **09640**

Manufactured By:

CRC Industries, Inc.
885 Louis Drive
Warminster, PA 18974
www.crcindustries.com

General Information	(215) 674-4300
Technical Assistance	(800) 521-3168
Customer Service	(800) 272-8963
24-Hr Emergency (CHEMTREC)	(800) 424-9300

Section 2: Hazards Identification

Emergency Overview

Appearance & Odor: Colorless liquid, irritating odor at high concentrations

DANGER
Vapor Harmful. Contents Under Pressure.

As defined by OSHA's Hazard Communication Standard, this product is hazardous.

Potential Health Effects:

EYE:	May cause slight temporary eye irritation. Vapors may irritate the eyes at concentrations of 100 ppm.
SKIN:	Short single exposure may cause skin irritation. Prolonged exposure may cause severe skin irritation, even a burn. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.
INHALATION:	Dizziness may occur at concentrations of 200 ppm. Progressively higher levels may also cause nasal irritation, nausea, incoordination, and drunkenness. Very high levels or prolonged exposure could lead to unconsciousness and death.
INGESTION:	Single dose oral toxicity is considered to be extremely low. Swallowing large amounts may cause injury if aspirated into the lungs. This may be rapidly absorbed through the lungs and result in injury to other body systems.
CHRONIC EFFECTS:	Repeated contact with skin may cause drying or flaking of skin. Excessive or long term exposure to vapors may increase sensitivity to epinephrine and increase myocardial irritability.
TARGET ORGANS:	Central nervous system. Possibly liver and kidney.

See Section 11 for toxicology and carcinogenicity information on product ingredients.

Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
Tetrachloroethylene (PERC)	127-18-4	> 95
Carbon Dioxide	124-38-9	< 5

Section 4: First Aid Measures

Eye Contact: Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.

Skin Contact: Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.

Inhalation: Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Call a physician.

Ingestion: Do NOT induce vomiting. Call a physician immediately.

Note to Physicians: Because rapid absorption may occur through lungs if aspirated and cause systemic effects, the decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. If burn is present, treat as any thermal burn, after decontamination. Exposure may increase myocardial irritability. Do not administer sympathomimetic drugs unless absolutely necessary. No specific antidote.

Section 5: Fire-Fighting Measures

Flammable Properties: This product is nonflammable.

Flash Point:	None (TCC)	Upper Explosive Limit:	None
Autoignition Temperature:	None	Lower Explosive Limit:	None

Suitable Extinguishing Media: This material does not burn. Use extinguishing agent suitable for surrounding fire.

Products of Combustion: Hydrogen chloride. Trace amounts of phosgene, and chlorine.

Protection of Fire-Fighters: Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition.

Section 6: Accidental Release Measures

Personal Precautions: Use personal protection recommended in Section 8. Do not breathe vapors.

Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush

into sewers or storm drains.

Methods for Containment & Clean-up: Dike area to contain spill. Ventilate the area with fresh air. If in confined space or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

Section 7: Handling and Storage

Handling Procedures: Vapors of this product are heavier than air and will collect in low areas. Make sure ventilation removes vapors from low areas. Do not eat, drink or smoke while using this product.

Storage Procedures: Store in a cool dry area out of direct sunlight. Aerosol cans must be maintained below 120 F to prevent cans from rupturing.

Aerosol Storage Level: I

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

	OSHA		ACGIH		OTHER		
COMPONENT	TWA	STEL	TWA	STEL	TWA	SOURCE	UNIT
Tetrachloroethylene	100	N.E.	25	100	N.E.		ppm
Carbon dioxide	5000	30000 v	5000	30,000	N.E.		ppm
N.E. – Not Established (c) – ceiling (s) – skin (v) – vacated							

Engineering Controls: Area should have ventilation to provide fresh air. Use local exhaust to prevent accumulation of vapors. Provide proper exhaust to remove vapors from low areas. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations

Respiratory Protection: None required for normal work where adequate ventilation is provided. Use NIOSH-approved self-contained positive pressure respirators in low circulation areas and for emergencies.

Eye/face Protection: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

Skin Protection: Use protective gloves such as PVA, Teflon or Viton. Also , use full protective clothing if there is prolonged or repeated contact of liquid with skin.

Section 9: Physical and Chemical Properties

Physical State: liquid
Color: colorless
Odor: irritating odor
Specific Gravity: 1.619

Initial Boiling Point: 250 F
Freezing Point: ND
Vapor Pressure: 13 mmHg @ 68 F
Vapor Density: 5.76 (air = 1)
Evaporation Rate: > 1 (ether = 1)
Solubility: 0.015 g/ 100 g @ 77 F in water
pH: NA
Volatile Organic Compounds: wt %: 0 g/L: 0 lbs./gal: 0

Section 10: Stability and Reactivity

Stability: Stable

Conditions to Avoid: Avoid direct sunlight or ultraviolet sources. Avoid open flames, welding arcs, and other high temperature sources which induce thermal decomposition.

Incompatible Materials: Avoid contact with metals such as: aluminum powders, magnesium powders, potassium, sodium, and zinc powder. Avoid unintended contact with amines. Avoid contact with strong bases and strong oxidizers.

Hazardous Decomposition Products: Hydrogen chloride, trace amounts of chlorine and phosgene

Possibility of Hazardous Reactions: No

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

ACUTE EFFECTS

Component	Test	Result	Route	Species
tetrachloroethylene	LD50	> 10 g/kg	dermal	rabbit
tetrachloroethylene	LD50	2629 mg/kg	oral	rat
tetrachloroethylene	LC50	5200 mg/kg/4H	inhalation	mouse

CHRONIC EFFECTS

Carcinogenicity:

	Component	Result
OSHA:	Tetrachloroethylene	Hazard communication carcinogen
IARC:	Tetrachloroethylene	2A (Probably carcinogenic)
NTP:	Tetrachloroethylene	Reasonably anticipated to be a carcinogen

Mutagenicity: tetrachloroethylene — in vitro studies were negative; animal studies were negative

Other: None

Section 12: Ecological Information

Ecotoxicity: Tetrachloroethylene -- 96 Hr LC50 Rainbow Trout: 5.28 mg/L (static)
96 Hr LC50 Fathead minnow: 13.4 mg/L (flow-through)

Persistence / Degradability:	Biodegradation under aerobic conditions is below detectable limits. Biodegradation may occur under anaerobic conditions. Biodegradation rate may increase in soil and/or water with acclimation.
Bioaccumulation / Accumulation:	Bioconcentration potential is low (BCF less than 100).
Mobility in Environment:	Potential for mobility in soil is medium.

Section 13: Disposal Considerations

Disposal: The dispensed liquid product is a RCRA hazardous waste for toxicity with the following potential waste codes: U210, F001, F002, F039. (See 40 CFR Part 261.20 – 261.33)
Aerosol containers should be emptied and depressurized before disposal. Empty containers may be recycled. Any liquid product should be managed as a hazardous waste.

All disposal activities must comply with federal, state and local regulations. Local regulations may be more stringent than state or national requirements.

Section 14: Transport Information

Proper shipping description:

US DOT (ground): Consumer Commodity, ORM-D

Special Provisions: None

Section 15: Regulatory Information

U.S. Federal

Toxic Substances Control Act (TSCA):

All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

Reportable Quantities (RQ's) exist for the following ingredients: Tetrachloroethylene (100 lbs)

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Superfund Amendments Reauthorization Act (SARA) Title III:

Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:

Fire Hazard	No
Reactive Hazard	No
Release of Pressure	Yes
Acute Health Hazard	Yes
Chronic Health Hazard	Yes

Section 313 Toxic Chemicals: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:
tetrachloroethylene (97.7%)

Clean Air Act:

Section 112 Hazardous Air Pollutants (HAPs): tetrachloroethylene

State Regulations

California Safe Drinking Water and Toxic Enforcement Act (Prop 65):

This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: Tetrachloroethylene

State Right to Know:

New Jersey:	tetrachloroethylene, carbon dioxide
Pennsylvania:	tetrachloroethylene, carbon dioxide
Massachusetts:	tetrachloroethylene, carbon dioxide
Rhode Island :	tetrachloroethylene, carbon dioxide

Additional Regulatory Information: This product cannot be sold for use in California and New Jersey. In other states with Consumer Products VOC regulations, this product is compliant as a Brake Cleaner.

Section 16: Other Information

NFPA:	Health:	2	Flammability:	0	Reactivity:	0		
HMIS:	Health:	2	Flammability:	0	Reactivity:	0	PPE:	B

Prepared By: Michelle Rudnick
CRC #: 491G
Revision Date: 01/15/2009

Changes since last revision: Section 15: Additional Regulatory Information revised

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label.

CAS:	Chemical Abstract Service	NA:	Not Applicable
ppm:	Parts per Million	ND:	Not Determined
TCC:	Tag Closed Cup	NE:	Not Established
PMCC:	Pensky-Martens Closed Cup	g/L:	grams per Liter
PPE:	Personal Protection Equipment	lbs./gal:	pounds per gallon
TWA:	Time Weighted Average	STEL:	Short Term Exposure Limit
OSHA:	Occupational Safety and Health Administration		
ACGIH	American Association of Governmental Industrial Hygienists		
NIOSH	National Institute of Occupational Safety & Health		

The Valvoline Company Date Prepared: 01/14/02

MSDS No: 505.0200299-007.004I

PARTS PLUS DEXRON III/MERCON 12/1 QT

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity
Product Name: ATF DEXRON III/MERCON 12/1 QT PART # 3374
General or Generic ID: PETROLEUM BASED-LUBRICATING OIL

Company	Telephone Numbers	
The Valvoline Company P.O. Box 14000 Lexington, KY 40512	Emergency:	1-800-274-5263
	Information:	1-859-357-7206

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	% (by weight)
ALIPHATIC PETROLEUM DISTILLATES	64742-65-0	73.0- 83.0
TRANSMISSION FLUID PACKAGE		

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3. HAZARDS IDENTIFICATION

Potential Health Effects

Eye
Unlikely to cause eye irritation or injury.

Skin
Prolonged or repeated contact may dry and crack the skin. Additional symptoms of skin contact may include: acne, Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects during safe handling and use.

Swallowing
Swallowing small amounts of this material during normal handling is not likely to cause harmful effects.

Inhalation
It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing small amounts of this material during normal handling is not likely to cause harmful effects.

Symptoms of Exposure
Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea) irritation (nose, throat, airways).

Target Organ Effects
No data

Developmental Information

There are no data available for assessing risk to the fetus from maternal exposure to this material.

Cancer Information

This material is not listed as a carcinogen by the International Agency for Research on Cancer, the National Toxicology Program, or the Occupational Safety and Health Administration.

Other Health Effects

No data

Primary Route(s) of Entry

Inhalation, Skin contact, Eye contact, Ingestion.

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4. FIRST AID MEASURES

Eyes

If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention.

Skin

First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.

Swallowing

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

Note to Physicians

Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities. Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin, lung (for example, asthma-like conditions).

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5. FIRE FIGHTING MEASURES

Flash Point

365.0 F (185.0 C) COC

Explosive Limit
No data

Autoignition Temperature
No data

Hazardous Products of Combustion
May form: carbon dioxide and carbon monoxide, various hydrocarbons.

Fire and Explosion Hazards
Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Dense smoke may be generated while burning.

Extinguishing Media
regular foam, carbon dioxide, dry chemical.

Fire Fighting Instructions
Water or foam may cause frothing which can be violent and possibly endanger the life of the firefighter. Water may be used to keep fire-exposed containers cool until fire is out. Wear a self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.

NFPA Rating
Health - 1, Flammability - 1, Reactivity - 0

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6. ACCIDENTAL RELEASE MEASURES

Small Spill
Absorb liquid on vermiculite, floor absorbent or other absorbent material. Persons not wearing proper personal protective equipment should be excluded from area of spill.

Large Spill
Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occured. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

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7. HANDLING AND STORAGE

Handling
Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed. All five gallon pails and larger metal containers including tank cars and tank trucks should be grounded and/or bonded when material is transferred. Avoid prolonged or repeated contact.

Storage
Do not store near extreme heat, open flame, or sources of ignition.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection

Not required under normal conditions of use. However, if misting or splashing conditions exist, then safety glasses or chemical splash goggles are advised.

Skin Protection

Wear resistant gloves (consult your safety equipment supplier). To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

Respiratory Protections

If workplace exposure limit(s) of product or any component is exceeded (See Exposure Guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (consult your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

Engineering Controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

Exposure Guidelines
Component

ALIPHATIC PETROLEUM DISTILLATES (64742-65-0)
OSHA VPEL 5.000 mg/m3 - TWA
ACGIH TLV 5.000 mg/m3 - TWA

TRANSMISSION FLUID PACKAGE
No exposure limits established

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point

No data

Vapor Pressure

No data

Specific Vapor Density

No data

Specific Gravity

.875 @ 60.00 F

Liquid Density

7.290 lbs/gal @ 60.00 F
.875 kg/l @ 15.60 C

Percent Volatiles (Including Water)

No data

Evaporation Rate

SLOWER THAN ETHYL ETHER

Appearance
No data

State
LIQUID

Physical Form
No data

Color
RED

Odor
PETROLEUM

pH
No data

Viscosity

6.9	- 8.0	cst	@	100 C
29.0	- 42.6	cst	@	40 C
> 175.0	ratio			

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10. STABILITY AND REACTIVITY

Hazardous Polymerization
Product will not undergo hazardous polymerization.

Hazardous Decomposition
May form: carbon dioxide and carbon monoxide, various hydrocarbons.

Chemical Stability
Stable.

Incompatibility
Avoid contact with: strong oxidizing agents.

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11. TOXICOLOGICAL INFORMATION

No data

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12. ECOLOGICAL INFORMATION

No data

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13. DISPOSAL CONSIDERATION

Waste Management Information
Dispose of in accordance with all applicable local, state and federal regulations.

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14. TRANSPORT INFORMATION

DOT Information - 49 CFR 172.101

DOT Description:

Not Regulated

Container/Mode:

CASES/SURFACE - NO EXCEPTIONS

NOS Component:

None

RQ (Reportable Quantity) - 49 CFR 172.101

Not applicable

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15. REGULATORY INFORMATION

US Federal Regulations

TSCA (Toxic Substances Control Act) Status

TSCA (UNITED STATES) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4

None

SARA 302 Components - 40 CFR 355 Appendix A

None

Section 311/312 Hazard Class - 40 CFR 370.2

Immediate(X) Delayed( ) Fire( ) Reactive( ) Sudden Release of Pressure( )

SARA 313 Components - 40 CFR 372.65

None

International Regulations

Inventory Status

AICS (AUSTRALIA) The intentional ingredients of this product are listed.

DSL (CANADA) The intentional ingredients of this product are listed.

EINECS (EUROPE) The intentional ingredients of this product are listed.

State and Local Regulations

California Proposition 65

None

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16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

PARTS PLUS ® SAE 10W-30 PREMIUM
MOTOR OIL
PP3373

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Ashland P.O. Box 2219 Columbus, OH 43216	Regulatory Information Number Telephone Emergency telephone number	1-800-325-3751 614-790-3333 1-800-ASHLAND (1-800-274-5263)

Product name	PARTS PLUS ® SAE 10W-30 PREMIUM MOTOR OIL
Product code	PP3373
Product Use Description	No data

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: liquid

CAUTION! PROLONGED OR REPEATED CONTACT MAY DRY THE SKIN AND CAUSE IRRITATION AND BURNS.

Potential Health Effects

Exposure routes
Inhalation, Skin absorption, Skin contact, Eye Contact, Ingestion

Eye contact
May cause mild eye irritation. Symptoms include stinging, tearing, and redness.

Skin contact
May cause mild skin irritation. Symptoms may include redness and burning of skin. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, and drying and cracking of skin, skin burns, and other skin damage.

Ingestion
Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful.

Inhalation

It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8.).

Aggravated Medical Condition

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material:, Skin, lung (for example, asthma-like conditions)

Symptoms

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:, acne, stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways)

Target Organs

No data

Carcinogenicity

This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA). Used motor oil has been shown to cause skin cancer in laboratory animals continually exposed by repeated applications. Avoid prolonged or repeated skin contact.

Reproductive hazard

There are no data available for assessing risk to the fetus from maternal exposure to this material.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components	CAS-No.	Concentration
HEAVY PARAFFINIC DISTILLATE	64742-54-7	>=60-<70%
HEAVY PARAFFINIC DISTILLATE	64742-54-7	>=30-<40%

4. FIRST AID MEASURES

Eyes

If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention.

Skin

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

Ingestion

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

Notes to physician

Hazards: Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

Treatment: No information available.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Dry chemical, Carbon dioxide (CO_2), Water spray

Hazardous combustion products

carbon dioxide and carbon monoxide, Hydrocarbons

Precautions for fire-fighting

Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). DO NOT direct a solid stream of water or foam into hot, burning pools of liquid since this may cause frothing and increase fire intensity. Frothing can be violent and possibly endanger any firefighter standing too close to the burning liquid. Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning material with water used for cooling purposes.

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

For personal protection see section 8. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions

Prevent spreading over a wide area (e.g. by containment or oil barriers). Do not let product enter drains. Do not flush into surface water or sanitary sewer system.

Methods for cleaning up

Keep in suitable, closed containers for disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Other information

Comply with all applicable federal, state, and local regulations.

7. HANDLING AND STORAGE

Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

Storage

Store in a cool, dry, ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

HYDROTREATED PARAFFINIC DISTILLATE, DEWAXED

General advice

These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Exposure controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Eye protection

Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection

Wear normal work clothing including long pants, long-sleeved shirts and foot covering to prevent direct contact of the product with the skin. Launder clothing before reuse. If skin irritation develops, contact your facility health and safety professional or your local safety equipment supplier to determine the proper personal protective equipment for your use.
Wear resistant gloves (consult your safety equipment supplier).

Respiratory protection

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid
Form	no data available
Colour	no data available
Odour	no data available
Boiling point/boiling range	no data available
Melting point/range	no data available
Sublimation point	no data available
pH	no data available
Flash point	(>)390 °F / 199 °C Cleveland open cup
Ignition temperature	no data available
Evaporation rate	no data available
Lower explosion limit/Upper explosion limit	no data available
Particle size	no data available
Vapour pressure	0.013 hPa @ 70.00 °F / 21.11 °C Calculated Vapor Pressure
Relative vapour density	no data available
Density	0.869 g/cm3 @ 60.01 °F / 15.56 °C 7.34 lb/gal @ 60.00 °F / 15.56 °C
Bulk density	No data
Water solubility	no data available
Solubility	no data available
Partition coefficient: n-octanol/water	no data available
log Pow	no data available
Autoignition temperature	no data available
Viscosity, dynamic	no data available
Viscosity, kinematic	10.5 mm2/s
Solids in Solution	no data available
Decomposition temperature	no data available
Burning number	no data available
Dust explosion constant	no data available
Minimum ignition energy	no data available

10. STABILITY AND REACTIVITY

Stability

Stable.

Conditions to avoid
None known.

Incompatible products
Strong oxidizing agents

Hazardous decomposition products
carbon dioxide and carbon monoxide, Hydrocarbons

Hazardous reactions
Product will not undergo hazardous polymerization.

Thermal decomposition
No data

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity

HEAVY PARAFFINIC DISTILLATE	:	LD 50 Rat: > 15 g/kg
HEAVY PARAFFINIC DISTILLATE	:	LD 50 Rat: > 15 g/kg

Acute inhalation toxicity

HEAVY PARAFFINIC DISTILLATE	:	no data available
HEAVY PARAFFINIC DISTILLATE	:	no data available

Acute dermal toxicity

HEAVY PARAFFINIC DISTILLATE	:	LD 50 Rabbit: > 5 g/kg
HEAVY PARAFFINIC DISTILLATE	:	LD 50 Rabbit: > 5 g/kg

12. ECOLOGICAL INFORMATION

Biodegradability

HEAVY PARAFFINIC DISTILLATE : no data available

HEAVY PARAFFINIC DISTILLATE : no data available

Bioaccumulation

HEAVY PARAFFINIC DISTILLATE : no data available

HEAVY PARAFFINIC DISTILLATE : no data available

Ecotoxicity effects

Toxicity to fish

HEAVY PARAFFINIC DISTILLATE : no data available

HEAVY PARAFFINIC DISTILLATE : no data available

Toxicity to daphnia and other aquatic invertebrates.

HEAVY PARAFFINIC DISTILLATE : no data available

HEAVY PARAFFINIC DISTILLATE : no data available

Toxicity to algae

HEAVY PARAFFINIC DISTILLATE : no data available

HEAVY PARAFFINIC DISTILLATE : no data available

Toxicity to bacteria

HEAVY PARAFFINIC DISTILLATE : no data available

HEAVY PARAFFINIC DISTILLATE : no data available

Biochemical Oxygen Demand (BOD)

HEAVY PARAFFINIC DISTILLATE : no data available

HEAVY PARAFFINIC DISTILLATE : no data available

Chemical Oxygen Demand (COD)

HEAVY PARAFFINIC DISTILLATE	:	no data available
HEAVY PARAFFINIC DISTILLATE	:	no data available

Additional ecological information

HEAVY PARAFFINIC DISTILLATE	:	no data available
HEAVY PARAFFINIC DISTILLATE	:	no data available

13. DISPOSAL CONSIDERATIONS

Waste disposal methods

Dispose of in accordance with all applicable local, state and federal regulations. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Ashland Distribution's Environmental Services Group at 800-637-7922.

14. TRANSPORT INFORMATION

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

U.S. DOT - RAIL

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TRANSPORT CANADA - ROAD

Not dangerous goods

TRANSPORT CANADA - RAIL

Not dangerous goods

TRANSPORT CANADA - INLAND WATERWAYS

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

15. REGULATORY INFORMATION

California Prop. 65

Proposition 65 warnings are not required for this product based on the results of a risk assessment.	

SARA Hazard Classification
No SARA Hazards

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

New Jersey RTK Label Information

HEAVY PARAFFINIC DISTILLATE	64742-54-7
HEAVY PARAFFINIC DISTILLATE	64742-54-7
HYDROTREATED PARAFFINIC DISTILLATE, DEWAXED	
POLYOLEFIN AMIDE ALKENEAMINE	

LUBRICANT ADDITIVE

Pennsylvania RTK Label Information

HEAVY PARAFFINIC DISTILLATE	64742-54-7
HEAVY PARAFFINIC DISTILLATE	64742-54-7
HYDROTREATED PARAFFINIC DISTILLATE, DEWAXED	

Notification status

US. Toxic Substances Control Act	y (positive listing)
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133)	y (positive listing)
Australia. Industrial Chemical (Notification and Assessment) Act	y (positive listing)
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	y (positive listing)
Japan. Kashin-Hou Law List	e (special case)
Korea. Toxic Chemical Control Law (TCCL) List	y (positive listing)
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	y (positive listing)
China. Inventory of Existing Chemical Substances	q (quantity restricted)

	HMIS	NFPA
Health	1	1
Flammability	1	1
Physical hazards	--	
Instability		0
Specific Hazard	--	--

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

PARTS PLUS ® SAE 20W-50 HIGH PERFORMANCE MOTOR OIL
PP3301

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Ashland P.O. Box 2219 Columbus, OH 43216	Regulatory Information Number Telephone Emergency telephone number	1-800-325-3751 614-790-3333 1-800-ASHLAND (1-800-274-5263)

Product name	PARTS PLUS ® SAE 20W-50 HIGH PERFORMANCE MOTOR OIL
Product code	PP3301
Product Use Description	No data

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: liquid, amber

CAUTION! PROLONGED OR REPEATED CONTACT MAY DRY THE SKIN AND CAUSE IRRITATION AND BURNS.

Potential Health Effects

Exposure routes
Inhalation, Skin absorption, Skin contact, Eye Contact, Ingestion

Eye contact
May cause mild eye irritation. Symptoms include stinging, tearing, and redness.

Skin contact
May cause mild skin irritation. Symptoms may include redness and burning of skin. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, and drying and cracking of skin, skin burns, and other skin damage.

Ingestion
Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful.

Inhalation

It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8.).

Aggravated Medical Condition

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material:, Skin, lung (for example, asthma-like conditions)

Symptoms

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:, acne, stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways)

Target Organs

No data

Carcinogenicity

This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA). Used motor oil has been shown to cause skin cancer in laboratory animals continually exposed by repeated applications. Avoid prolonged or repeated skin contact.

Reproductive hazard

There are no data available for assessing risk to the fetus from maternal exposure to this material.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components	CAS-No.	Concentration
HEAVY PARAFFINIC DISTILLATE	64742-54-7	>=80-<90%
HEAVY PARAFFINIC DISTILLATE	64742-54-7	>=10-<15%

4. FIRST AID MEASURES

Eyes

If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention.

Skin

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

Ingestion

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

Notes to physician

Hazards: Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

Treatment: No information available.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Dry chemical, Carbon dioxide (CO_2), Water spray

Hazardous combustion products

carbon dioxide and carbon monoxide, Hydrocarbons

Precautions for fire-fighting

Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). DO NOT direct a solid stream of water or foam into hot, burning pools of liquid since this may cause frothing and increase fire intensity. Frothing can be violent and possibly endanger any firefighter standing too close to the burning liquid. Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning material with water used for cooling purposes.

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

For personal protection see section 8. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions

Prevent spreading over a wide area (e.g. by containment or oil barriers). Do not let product enter drains. Do not flush into surface water or sanitary sewer system.

Methods for cleaning up

Keep in suitable, closed containers for disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Other information

Comply with all applicable federal, state, and local regulations.

7. HANDLING AND STORAGE

Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

Storage

Store in a cool, dry, ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

HYDROTREATED PARAFFINIC DISTILLATE, DEWAXED

General advice

These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Exposure controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Eye protection

Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection

Wear normal work clothing including long pants, long-sleeved shirts and foot covering to prevent direct contact of the product with the skin. Launder clothing before reuse. If skin irritation develops, contact your facility health and safety professional or your local safety equipment supplier to determine the proper personal protective equipment for your use.
Wear resistant gloves (consult your safety equipment supplier).

Respiratory protection

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid
Form	no data available
Colour	amber
Odour	hydrocarbon-like
Boiling point/boiling range	no data available
Melting point/range	no data available
Sublimation point	no data available
pH	no data available
Flash point	(>)390 °F / 199 °C Cleveland open cup
Ignition temperature	no data available
Evaporation rate	no data available
Lower explosion limit/Upper explosion limit	1 %(V) / 6 %(V)
Particle size	no data available
Vapour pressure	0.013 hPa @ 70.00 °F / 21.11 °C Calculated Vapor Pressure
Relative vapour density	no data available
Density	0.8834 g/cm3 @ 60.01 °F / 15.56 °C 7.42 lb/gal @ 60.1 °F / 15.6 °C
Bulk density	No data
Water solubility	no data available
Solubility	no data available
Partition coefficient: n-octanol/water	no data available
log Pow	no data available
Autoignition temperature	no data available
Viscosity, dynamic	no data available
Viscosity, kinematic	18.5 mm2/s
Solids in Solution	no data available
Decomposition temperature	no data available
Burning number	no data available
Dust explosion constant	no data available
Minimum ignition energy	no data available

10. STABILITY AND REACTIVITY

Stability

Stable.

Conditions to avoid
None known.

Incompatible products
Strong oxidizing agents

Hazardous decomposition products
carbon dioxide and carbon monoxide, Hydrocarbons

Hazardous reactions
Product will not undergo hazardous polymerization.

Thermal decomposition
No data

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity

HEAVY PARAFFINIC DISTILLATE	:	LD 50 Rat: > 15 g/kg
HEAVY PARAFFINIC DISTILLATE	:	LD 50 Rat: > 15 g/kg

Acute inhalation toxicity

HEAVY PARAFFINIC DISTILLATE	:	no data available
HEAVY PARAFFINIC DISTILLATE	:	no data available

Acute dermal toxicity

HEAVY PARAFFINIC DISTILLATE	:	LD 50 Rabbit: > 5 g/kg
HEAVY PARAFFINIC DISTILLATE	:	LD 50 Rabbit: > 5 g/kg

12. ECOLOGICAL INFORMATION

Biodegradability

HEAVY PARAFFINIC DISTILLATE	:	no data available
HEAVY PARAFFINIC DISTILLATE	:	no data available

Bioaccumulation

HEAVY PARAFFINIC DISTILLATE	:	no data available
HEAVY PARAFFINIC DISTILLATE	:	no data available

Ecotoxicity effects

Toxicity to fish

HEAVY PARAFFINIC DISTILLATE	:	no data available
HEAVY PARAFFINIC DISTILLATE	:	no data available

Toxicity to daphnia and other aquatic invertebrates.

HEAVY PARAFFINIC DISTILLATE	:	no data available
HEAVY PARAFFINIC DISTILLATE	:	no data available

Toxicity to algae

HEAVY PARAFFINIC DISTILLATE	:	no data available
HEAVY PARAFFINIC DISTILLATE	:	no data available

Toxicity to bacteria

HEAVY PARAFFINIC DISTILLATE	:	no data available
HEAVY PARAFFINIC DISTILLATE	:	no data available

Biochemical Oxygen Demand (BOD)

HEAVY PARAFFINIC DISTILLATE	:	no data available
HEAVY PARAFFINIC DISTILLATE	:	no data available

Chemical Oxygen Demand (COD)

HEAVY PARAFFINIC DISTILLATE	:	no data available
HEAVY PARAFFINIC DISTILLATE	:	no data available

Additional ecological information

HEAVY PARAFFINIC DISTILLATE	:	no data available
HEAVY PARAFFINIC DISTILLATE	:	no data available

13. DISPOSAL CONSIDERATIONS

Waste disposal methods

Dispose of in accordance with all applicable local, state and federal regulations. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Ashland Distribution's Environmental Services Group at 800-637-7922.

14. TRANSPORT INFORMATION

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

U.S. DOT - RAIL

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TRANSPORT CANADA - ROAD

Not dangerous goods

TRANSPORT CANADA - RAIL

Not dangerous goods

TRANSPORT CANADA - INLAND WATERWAYS

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

15. REGULATORY INFORMATION

California Prop. 65

Proposition 65 warnings are not required for this product based on the results of a risk assessment.	

SARA Hazard Classification
No SARA Hazards

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

New Jersey RTK Label Information

HEAVY PARAFFINIC DISTILLATE	64742-54-7
HEAVY PARAFFINIC DISTILLATE	64742-54-7
HYDROTREATED PARAFFINIC DISTILLATE, DEWAXED	
POLYOLEFIN AMIDE ALKENEAMINE	

LUBRICANT ADDITIVE

Pennsylvania RTK Label Information

HEAVY PARAFFINIC DISTILLATE	64742-54-7
HEAVY PARAFFINIC DISTILLATE	64742-54-7
HYDROTREATED PARAFFINIC DISTILLATE, DEWAXED	

Notification status

US. Toxic Substances Control Act	y (positive listing)
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133)	y (positive listing)
Australia. Industrial Chemical (Notification and Assessment) Act	y (positive listing)
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	y (positive listing)
Japan. Kashin-Hou Law List	e (special case)
Korea. Toxic Chemical Control Law (TCCL) List	y (positive listing)
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	y (positive listing)
China. Inventory of Existing Chemical Substances	q (quantity restricted)

	HMIS	NFPA
Health	1	1
Flammability	1	1
Physical hazards	--	
Instability		0
Specific Hazard	--	--

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

PARTS PLUS ® SAE 10W-40 PREMIUM
MOTOR OIL
PP3372

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Ashland P.O. Box 2219 Columbus, OH 43216	Regulatory Information Number Telephone Emergency telephone number	1-800-325-3751 614-790-3333 1-800-ASHLAND (1-800-274-5263)

Product name	PARTS PLUS ® SAE 10W-40 PREMIUM MOTOR OIL
Product code	PP3372
Product Use Description	No data

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: liquid, amber

CAUTION! PROLONGED OR REPEATED CONTACT MAY DRY THE SKIN AND CAUSE IRRITATION AND BURNS.

Potential Health Effects

Exposure routes
Inhalation, Skin absorption, Skin contact, Eye Contact, Ingestion

Eye contact
May cause mild eye irritation. Symptoms include stinging, tearing, and redness.

Skin contact
May cause mild skin irritation. Symptoms may include redness and burning of skin. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, and drying and cracking of skin, skin burns, and other skin damage.

Ingestion
Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful.

Inhalation

It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8.).

Aggravated Medical Condition

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material:, Skin, lung (for example, asthma-like conditions)

Symptoms

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:, acne, stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways)

Target Organs

No data

Carcinogenicity

This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA). Used motor oil has been shown to cause skin cancer in laboratory animals continually exposed by repeated applications. Avoid prolonged or repeated skin contact.

Reproductive hazard

There are no data available for assessing risk to the fetus from maternal exposure to this material.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components	CAS-No.	Concentration
HEAVY PARAFFINIC DISTILLATE	64742-54-7	>=60-<70%
HEAVY PARAFFINIC DISTILLATE	64742-54-7	>=20-<30%

4. FIRST AID MEASURES

Eyes

If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention.

Skin

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

Ingestion

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

Notes to physician

Hazards: Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

Treatment: No information available.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Dry chemical, Carbon dioxide (CO_2), Water spray

Hazardous combustion products

carbon dioxide and carbon monoxide, Hydrocarbons

Precautions for fire-fighting

Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). DO NOT direct a solid stream of water or foam into hot, burning pools of liquid since this may cause frothing and increase fire intensity. Frothing can be violent and possibly endanger any firefighter standing too close to the burning liquid. Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning material with water used for cooling purposes.

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

For personal protection see section 8. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions

Prevent spreading over a wide area (e.g. by containment or oil barriers). Do not let product enter drains. Do not flush into surface water or sanitary sewer system.

Methods for cleaning up

Keep in suitable, closed containers for disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Other information

Comply with all applicable federal, state, and local regulations.

7. HANDLING AND STORAGE

Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

Storage

Store in a cool, dry, ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

HYDROTREATED PARAFFINIC DISTILLATE, DEWAXED

General advice

These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Exposure controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Eye protection

Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection

Wear normal work clothing including long pants, long-sleeved shirts and foot covering to prevent direct contact of the product with the skin. Launder clothing before reuse. If skin irritation develops, contact your facility health and safety professional or your local safety equipment supplier to determine the proper personal protective equipment for your use.
Wear resistant gloves (consult your safety equipment supplier).

Respiratory protection

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid
Form	no data available
Colour	amber
Odour	hydrocarbon-like
Boiling point/boiling range	570.00 °F / 298.89 °C @ 760.00 mmHg
Melting point/range	no data available
Sublimation point	no data available
pH	no data available
Flash point	(>)390 °F / 199 °C Cleveland open cup
Ignition temperature	no data available
Evaporation rate	1 Ethyl Ether
Lower explosion limit/Upper explosion limit	no data available
Particle size	no data available
Vapour pressure	no data available
Relative vapour density	no data available
Density	0.8690 g/cm3 @ 60.01 °F / 15.56 °C 7.34 lb/gal @ 60.00 °F / 15.56 °C
Bulk density	No data
Water solubility	no data available
Solubility	no data available
Partition coefficient: n-octanol/water	no data available
log Pow	no data available
Autoignition temperature	no data available
Viscosity, dynamic	no data available
Viscosity, kinematic	14 mm2/s
Solids in Solution	no data available
Decomposition temperature	no data available
Burning number	no data available
Dust explosion constant	no data available
Minimum ignition energy	no data available

10. STABILITY AND REACTIVITY

Stability

Stable.

Conditions to avoid

None known.

Incompatible products
Strong oxidizing agents

Hazardous decomposition products
carbon dioxide and carbon monoxide, Hydrocarbons

Hazardous reactions
Product will not undergo hazardous polymerization.

Thermal decomposition
No data

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity

HEAVY PARAFFINIC DISTILLATE	:	LD 50 Rat: > 15 g/kg
HEAVY PARAFFINIC DISTILLATE	:	LD 50 Rat: > 15 g/kg

Acute inhalation toxicity

HEAVY PARAFFINIC DISTILLATE	:	no data available
HEAVY PARAFFINIC DISTILLATE	:	no data available

Acute dermal toxicity

HEAVY PARAFFINIC DISTILLATE	:	LD 50 Rabbit: > 5 g/kg
HEAVY PARAFFINIC DISTILLATE	:	LD 50 Rabbit: > 5 g/kg

12. ECOLOGICAL INFORMATION

Biodegradability

HEAVY PARAFFINIC DISTILLATE	:	no data available
HEAVY PARAFFINIC DISTILLATE	:	no data available

Bioaccumulation

HEAVY PARAFFINIC DISTILLATE	:	no data available
HEAVY PARAFFINIC DISTILLATE	:	no data available

Ecotoxicity effects

Toxicity to fish

HEAVY PARAFFINIC DISTILLATE	:	no data available
HEAVY PARAFFINIC DISTILLATE	:	no data available

Toxicity to daphnia and other aquatic invertebrates.

HEAVY PARAFFINIC DISTILLATE	:	no data available
HEAVY PARAFFINIC DISTILLATE	:	no data available

Toxicity to algae

HEAVY PARAFFINIC DISTILLATE	:	no data available
HEAVY PARAFFINIC DISTILLATE	:	no data available

Toxicity to bacteria

HEAVY PARAFFINIC DISTILLATE	:	no data available
HEAVY PARAFFINIC DISTILLATE	:	no data available

Biochemical Oxygen Demand (BOD)

HEAVY PARAFFINIC DISTILLATE	:	no data available
HEAVY PARAFFINIC DISTILLATE	:	no data available

Chemical Oxygen Demand (COD)

HEAVY PARAFFINIC DISTILLATE	:	no data available

HEAVY PARAFFINIC DISTILLATE	:	no data available

Additional ecological information

HEAVY PARAFFINIC DISTILLATE	:	no data available
HEAVY PARAFFINIC DISTILLATE	:	no data available

13. DISPOSAL CONSIDERATIONS

Waste disposal methods

Dispose of in accordance with all applicable local, state and federal regulations. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Ashland Distribution's Environmental Services Group at 800-637-7922.

14. TRANSPORT INFORMATION

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

U.S. DOT - RAIL

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TRANSPORT CANADA - ROAD

Not dangerous goods

TRANSPORT CANADA - RAIL

Not dangerous goods

TRANSPORT CANADA - INLAND WATERWAYS

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

15. REGULATORY INFORMATION

California Prop. 65

Proposition 65 warnings are not required for this product based on the results of a risk assessment.	

SARA Hazard Classification
No SARA Hazards

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

New Jersey RTK Label Information

HEAVY PARAFFINIC DISTILLATE	64742-54-7
HEAVY PARAFFINIC DISTILLATE	64742-54-7
HYDROTREATED PARAFFINIC DISTILLATE, DEWAXED	
POLYOLEFIN AMIDE ALKENEAMINE	
LUBRICANT ADDITIVE	

Pennsylvania RTK Label Information

HEAVY PARAFFINIC DISTILLATE	64742-54-7
HEAVY PARAFFINIC DISTILLATE	64742-54-7
HYDROTREATED PARAFFINIC DISTILLATE, DEWAXED	

Notification status

US. Toxic Substances Control Act	y (positive listing)
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133)	y (positive listing)
Australia. Industrial Chemical (Notification and Assessment) Act	y (positive listing)
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	n (Negative listing)
Japan. Kashin-Hou Law List	e (special case)
Korea. Toxic Chemical Control Law (TCCL) List	y (positive listing)
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	y (positive listing)
China. Inventory of Existing Chemical Substances	q (quantity restricted)

	HMIS	NFPA
Health	1	1
Flammability	1	1
Physical hazards	0	
Instability		0
Specific Hazard	--	--

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

SAFETY DATA SHEET

Revision Date: 10/29/2012
Print Date: 1/2/2014
MSDS Number: R0289367
Version: 3.7

Durablend™ SAE 5W-30 SYNTHETIC BLEND MOTOR OIL
VV291

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Ashland P.O. Box 2219 Columbus, OH 43216	Regulatory Information Number Telephone Emergency telephone number	1-800-325-3751 614-790-3333 1-800-ASHLAND (1-800-274-5263)

Product name	Durablend™ SAE 5W-30 SYNTHETIC BLEND MOTOR OIL
Product code	VV291

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: liquid, amber

CAUTION! PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION.

Potential Health Effects

Exposure routes
Inhalation, Skin absorption, Skin contact, Eye Contact, Ingestion

Eye contact
May cause mild eye irritation. Symptoms include stinging, tearing, and redness.

Skin contact
May cause slight skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, and drying and cracking of skin, skin burns, and other skin damage.

Ingestion
Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful.

Inhalation

It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8.).

Aggravated Medical Condition

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material:, Skin, lung (for example, asthma-like conditions)

Symptoms

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:, acne, stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways)

Target Organs

No data

Carcinogenicity

This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA). Used motor oil has been shown to cause skin cancer in laboratory animals continually exposed by repeated applications. Avoid prolonged or repeated skin contact.

Reproductive hazard

There are no data available for assessing risk to the fetus from maternal exposure to this material.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components	CAS-No. / Trade Secret No.	Concentration
HEAVY PARAFFINIC DISTILLATE	64742-54-7	>=50-<60%
HYDROTREATED HEAVY PARAFFINIC BASE OIL	64742-54-7	>=30-<40%
RESIDUAL OILS (PETROLEUM), SOLVENT-DEWAXED	64742-62-7	>=1-<1.5%

4. FIRST AID MEASURES

Eyes

If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention.

Skin

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

Ingestion

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

Notes to physician

Hazards: Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

Treatment: No information available.

5. FIREFIGHTING MEASURES

Suitable extinguishing media

Dry chemical, Carbon dioxide (CO2), Water spray

Hazardous combustion products

carbon dioxide and carbon monoxide, Hydrocarbons

Precautions for fire-fighting

Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). DO NOT direct a solid stream of water or foam into hot, burning pools of liquid since this may cause frothing and increase fire intensity. Frothing can be violent and possibly endanger any firefighter standing too close to the burning liquid. Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning material with water used for cooling purposes.

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

For personal protection see section 8. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions

Prevent spreading over a wide area (e.g. by containment or oil barriers). Do not let product enter drains. Do not flush into surface water or sanitary sewer system.

Methods for cleaning up

Keep in suitable, closed containers for disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Other information

Comply with all applicable federal, state, and local regulations.

7. HANDLING AND STORAGE

Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

Storage

Store in a cool, dry, ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Contains no substances with occupational exposure limit values.

General advice

These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Exposure controls

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Eye protection

Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection

Wear normal work clothing including long pants, long-sleeved shirts and foot covering to prevent direct contact of the product with the skin. Launder clothing before reuse. If skin irritation develops, contact your facility health and safety professional or your local safety equipment supplier to determine the proper personal protective equipment for your use.
Wear resistant gloves (consult your safety equipment supplier).

Respiratory protection

Respiratory protection is not required under normal conditions of use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid
Colour	amber
Odour	hydrocarbon-like
Boiling point/boiling range	424.9 °F / 218.3 °C
Flash point	> 390 °F / > 199 °C Cleveland open cup
Lower explosion limit/Upper explosion limit	1 %(V) / 6 %(V)
Vapour pressure	0.013 hPa @ 70.00 °F / 21.11 °C Calculated Vapor Pressure
Density	0.857 g/cm3
Viscosity, dynamic	(<)3,400.000 mPa.s @ -25 °C
Viscosity, kinematic	(+/- 0.7)10.500 mm2/s @ 100 °C

10. STABILITY AND REACTIVITY

Stability
Stable.

Conditions to avoid
None known.

Incompatible products
Strong oxidizing agents

Hazardous decomposition products
carbon dioxide and carbon monoxide, Hydrocarbons

Hazardous reactions
Product will not undergo hazardous polymerization.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity

Acute oral toxicity -	:	no data available

Product

Acute oral toxicity - Components

HEAVY PARAFFINIC DISTILLATE	: LD 50: > 15 g/kg Species: Rat
HYDROTREATED HEAVY PARAFFINIC BASE OIL	: LD 50: > 15 g/kg Species: Rat

Acute inhalation toxicity

Acute inhalation toxicity - Product	: no data available

Acute dermal toxicity

Acute dermal toxicity - Product	: no data available

Acute dermal toxicity - Components

HEAVY PARAFFINIC DISTILLATE	: LD 50: > 5 g/kg Species: Rabbit
HYDROTREATED HEAVY PARAFFINIC BASE OIL	: LD 50: > 5 g/kg Species: Rabbit

Acute toxicity (other routes of administration)

Acute toxicity (other routes of administration)	: no data available

12. ECOLOGICAL INFORMATION

Biodegradability

Biodegradability - Product	: no data available

Bioaccumulation

Bioaccumulation - Product	: no data available

Ecotoxicity effects

Toxicity to fish

Toxicity to fish - Product	:	no data available

Toxicity to daphnia and other aquatic invertebrates

Toxicity to daphnia and other aquatic invertebrates - Product	:	no data available

Toxicity to algae

Toxicity to algae - Product	:	no data available

Toxicity to bacteria

Toxicity to bacteria - Product	:	no data available

13. DISPOSAL CONSIDERATIONS

Waste disposal methods

Dispose of in accordance with all applicable local, state and federal regulations.

14. TRANSPORT INFORMATION

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

U.S. DOT - RAIL

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TRANSPORT CANADA - ROAD

Not dangerous goods

TRANSPORT CANADA - RAIL

Not dangerous goods

TRANSPORT CANADA - INLAND WATERWAYS

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

15. REGULATORY INFORMATION

California Prop. 65

Proposition 65 warnings are not required for this product based on the results of a risk assessment.	

SARA Hazard Classification
SARA 311/312 Classification
No SARA Hazards

SARA 313 Component(s)
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

New Jersey RTK Label Information

HEAVY PARAFFINIC DISTILLATE	64742-54-7
HYDROTREATED HEAVY PARAFFINIC BASE OIL	64742-54-7
LUBRICANT ADDITIVE	
POLYOLEFIN AMIDE ALKENEAMINE	
LUBRICANT ADDITIVE	

Pennsylvania RTK Label Information

HEAVY PARAFFINIC DISTILLATE	64742-54-7
HYDROTREATED HEAVY PARAFFINIC BASE OIL	64742-54-7

Notification status

US. Toxic Substances Control Act	y (positive listing)
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133)	y (positive listing)
Australia. Industrial Chemical (Notification and Assessment) Act	y (positive listing)
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	n (Negative listing)
Japan. Kashin-Hou Law List	n (Negative listing)
Korea. Toxic Chemical Control Law (TCCL) List	y (positive listing)
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	y (positive listing)
China. Inventory of Existing Chemical Substances	q (quantity restricted)

SAFETY DATA SHEET

	HMIS	NFPA
Health	1	1
Flammability	1	1
Physical hazards	0	
Instability		0
Specific Hazard	--	--

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Ashland P.O. Box 2219 Columbus, OH 43216	Regulatory Information Number Telephone Emergency telephone	1-800-325-3751 614-790-3333 1-800-ASHLAND (1-800-274-5263)

Product name	PARTS PLUS ® SAE 15W-40 MOTOR OIL
Product code	PP3403
Product Use Description	No data

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: liquid, amber

CAUTION! PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION.

Potential Health Effects

Exposure routes
Inhalation, Skin contact, Eye Contact, Ingestion

Eye contact
May cause mild eye irritation. Symptoms include stinging, tearing, and redness.

Skin contact
May cause mild skin irritation. Symptoms may include redness and burning of skin. Prolonged or repeated contact may dry skin and cause irritation.

Ingestion
Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful.

Inhalation

It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8.).

Aggravated Medical Condition

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material:, Skin, lung (for example, asthma-like conditions)

Symptoms

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:, stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways)

Target Organs

No data

Carcinogenicity

This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA). Used motor oil has been shown to cause skin cancer in laboratory animals continually exposed by repeated applications. Avoid prolonged or repeated skin contact.

Reproductive hazard

There are no data available for assessing risk to the fetus from maternal exposure to this material.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components	CAS-No.	Concentration
HEAVY PARAFFINIC DISTILLATE	64742-54-7	>=80-<90%
ZINC COMPOUNDS	68649-42-3	>=1.5-<5%

4. FIRST AID MEASURES

Eyes

If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention.

Skin

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

Ingestion

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

Inhalation

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

Notes to physician

Hazards: Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

Treatment: No information available.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Dry chemical, Foam, Carbon dioxide (CO2), Water mist

Hazardous combustion products

carbon dioxide and carbon monoxide, Hydrocarbons, hydrogen sulfide, oxides of sulfur, nitrogen and phosphorus, zinc oxide, Amines

Precautions for fire-fighting

Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). DO NOT direct a solid stream of water or foam into hot, burning pools of liquid since this may cause frothing and increase fire intensity. Frothing can be violent and possibly endanger any firefighter standing too close to the burning liquid.

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

For personal protection see section 8. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Spills of this material are very slippery.

Environmental precautions

Prevent spreading over a wide area (e.g. by containment or oil barriers). Do not flush into surface water or sanitary sewer system.

Methods for cleaning up

Absorb liquid on vermiculite, floor absorbent or other absorbent material. Wash walking surfaces with detergent and water to reduce slipping hazard.

Other information

Notify the proper authorities as required that a spill has occurred. Comply with all applicable federal, state, and local regulations.

7. HANDLING AND STORAGE

Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

Storage

Store in a cool, dry, ventilated area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

AROMATIC HYDROCARBON

OSHA Z1	Permissible exposure limit	500 ppm	
OSHA Z1	Permissible exposure limit	2,000 mg/m3	
OSHA Z1A	time weighted average	400 ppm	
OSHA Z1A	time weighted average	1,600 mg/m3	
US CA OEL	Time Weighted Average (TWA) Permissible Exposure Limit (PEL):	400 ppm	
US CA OEL	Time Weighted Average (TWA) Permissible Exposure Limit (PEL):	1,600 mg/m3	
ACGIH	time weighted average	5 mg/m3	Mist.
ACGIH	Short term exposure limit	10 mg/m3	Mist.
ACGIH NIC	time weighted average	0.2 mg/m3	Inhalable fraction.

General advice

These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

Exposure controls

General room ventilation should be adequate for normal conditions of use. However, if unusual operating conditions exist, provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Eye protection

Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection

Wear resistant gloves (consult your safety equipment supplier).
Wear normal work clothing including long pants, long-sleeved shirts and foot covering to prevent direct contact of the product with the skin. Launder clothing before reuse. If skin irritation develops, contact your facility health and safety professional or your local safety equipment supplier to determine the proper personal protective equipment for your use.

Respiratory protection

Respiratory protection is not required under normal conditions of use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid
Form	no data available
Colour	amber
Odour	hydrocarbon-like
Boiling point/boiling range	no data available
Melting point/range	no data available
Sublimation point	no data available
pH	no data available
Flash point	(>)199.00 °C Cleveland open cup
Ignition temperature	no data available
Evaporation rate	no data available
Lower explosion limit/Upper explosion limit	1 %(V) / 6 %(V)
Particle size	no data available
Vapour pressure	0.013 hPa @ 70.00 °F / 21.11 °C Calculated Vapor Pressure
Relative vapour density	no data available
Density	0.880 g/cm3 @ 60.1 °F / 15.6 °C 7.4 lb/gal @ 60.1 °F / 15.6 °C
Bulk density	No data
Water solubility	negligible
Solubility	no data available
Partition coefficient: n-octanol/water	no data available
log Pow	no data available
Autoignition temperature	no data available
Viscosity, dynamic	no data available
Viscosity, kinematic	no data available
Solids in Solution	no data available
Decomposition temperature	no data available
Burning number	no data available
Dust explosion constant	no data available
Minimum ignition energy	no data available

10. STABILITY AND REACTIVITY

Stability
Stable

Conditions to avoid
excessive heat

Incompatible products
Strong oxidizing agents

Hazardous decomposition products
carbon dioxide and carbon monoxide, Hydrocarbons, oxides of sulfur, nitrogen and phosphorus

Hazardous reactions
Product will not undergo hazardous polymerization.

Thermal decomposition
No data

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity

HEAVY PARAFFINIC DISTILLATE	:	LD 50 Rat: > 15 g/kg
ZINC COMPOUNDS	:	LD 50 Rat: 2,000 - 5,000 mg/kg

Acute inhalation toxicity

HEAVY PARAFFINIC DISTILLATE	:	no data available
ZINC COMPOUNDS	:	no data available

Acute dermal toxicity

HEAVY PARAFFINIC DISTILLATE	:	LD 50 Rabbit: > 5 g/kg
ZINC COMPOUNDS	:	LD 50 Rabbit: (>) 2,000 mg/kg

12. ECOLOGICAL INFORMATION

Biodegradability

HEAVY PARAFFINIC DISTILLATE	:	no data available
ZINC COMPOUNDS	:	no data available

Bioaccumulation

HEAVY PARAFFINIC DISTILLATE	:	no data available
ZINC COMPOUNDS	:	no data available

Ecotoxicity effects

Toxicity to fish

HEAVY PARAFFINIC DISTILLATE	:	no data available
ZINC COMPOUNDS	:	no data available

Toxicity to daphnia and other aquatic invertebrates.

HEAVY PARAFFINIC DISTILLATE	:	no data available
ZINC COMPOUNDS	:	no data available

Toxicity to algae

HEAVY PARAFFINIC DISTILLATE	:	no data available
ZINC COMPOUNDS	:	no data available

Toxicity to bacteria

HEAVY PARAFFINIC DISTILLATE	:	no data available
ZINC COMPOUNDS	:	no data available

Biochemical Oxygen Demand (BOD)

HEAVY PARAFFINIC DISTILLATE	:	no data available
ZINC COMPOUNDS	:	no data available

Chemical Oxygen Demand (COD)

HEAVY PARAFFINIC DISTILLATE	:	no data available
ZINC COMPOUNDS	:	no data available

Additional ecological information

HEAVY PARAFFINIC DISTILLATE	:	no data available
ZINC COMPOUNDS	:	no data available

13. DISPOSAL CONSIDERATIONS

Waste disposal methods

Dispose of in accordance with all applicable local, state and federal regulations. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Ashland Distribution's Environmental Services Group at 800-637-7922.

14. TRANSPORT INFORMATION

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

U.S. DOT - RAIL

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TRANSPORT CANADA - ROAD

Not dangerous goods

TRANSPORT CANADA - RAIL

Not dangerous goods

TRANSPORT CANADA - INLAND WATERWAYS

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

15. REGULATORY INFORMATION

California Prop. 65

Proposition 65 warnings are not required for this product based on the results of a risk assessment.	

SARA Hazard Classification
No SARA Hazards

SARA 313 Component(s)

ZINC COMPOUNDS	1.59 %

New Jersey RTK Label Information

HEAVY PARAFFINIC DISTILLATE	64742-54-7
LUBRICANT ADDITIVE	
AROMATIC HYDROCARBON	
ZINC COMPOUNDS	
ZINC COMPOUNDS	68649-42-3

Pennsylvania RTK Label Information

HEAVY PARAFFINIC DISTILLATE	64742-54-7
LUBRICANT ADDITIVE	
AROMATIC HYDROCARBON	

Notification status

US. Toxic Substances Control Act	y (positive listing)
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133)	y (positive listing)
Australia. Industrial Chemical (Notification and Assessment) Act	y (positive listing)
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	n (Negative listing)
Japan. Kashin-Hou Law List	n (Negative listing)
Korea. Toxic Chemical Control Law (TCCL) List	y (positive listing)
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	y (positive listing)
China. Inventory of Existing Chemical Substances	y (positive listing)

Reportable quantity - Product

US. EPA CERCLA Hazardous Substances (40 CFR 302) 62500 lbs

Reportable quantity-Components

ARSENIC	7440-38-2	1 lbs

	HMIS	NFPA
Health	1	1
Flammability	1	1
Physical hazards	0	
Instability		0
Specific Hazard	--	--

16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

SC JOHNSON® PASTE WAX

Version *1*.0 Print Date 03/04/2015

Revision Date 02/18/2015 SDS Number 350000003598

1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Product name : **SC JOHNSON® PASTE WAX**

Recommended use : Furniture Polish/Cleaner

Manufacturer, importer, supplier : S.C. Johnson & Son, Inc.
1525 Howe Street
Racine WI 53403-2236

Telephone : +18005585252
Emergency telephone number : 24 Hour Medical Emergency Phone: (866)231-5406
24 Hour International Emergency Phone: (703)527-3887
24 Hour Transport Emergency Phone: (800)424-9300

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Globally Harmonized System (GHS) Classification

Hazard classification	Hazard category	Hazards identification
Carcinogenicity	Category 2	Suspected of causing cancer.
Specific target organ toxicity - repeated exposure	Category 1	Causes damage to organs through prolonged or repeated exposure.

Labelling
Hazard symbols
Health hazard

Signal word
Danger

Hazard statements
Suspected of causing cancer.
Causes damage to organs through prolonged or repeated exposure.

Precautionary statements
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Get medical advice/ attention if you feel unwell.
IF exposed or concerned: Get medical advice/ attention.

Store locked up.
Dispose of contents/ container to an approved incineration plant.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Use personal protective equipment as required.
Do not breathe spray.
Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.

Other hazards : None identified

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Weight percent
Stoddard solvent	8052-41-3	60.00 - 100.00
Paraffin waxes and Hydrocarbon waxes	8002-74-2	10.00 - 30.00
Ethyl Benzene	100-41-4	0.10 - 1.00
NAPHTHALENE	91-20-3	0.10 - 1.00
CUMENE	98-82-8	0.10 - 1.00

The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

For additional information on product ingredients, see www.whatsinsidescjohnson.com.

4. FIRST AID MEASURES

Eye contact : No special requirements

Skin contact : No special requirements

Inhalation : No special requirements.

Ingestion : No special requirements

5. FIREFIGHTING MEASURES

Suitable extinguishing : Use water spray, alcohol-resistant foam, dry chemical or

media		carbon dioxide.
Further information	:	Fight fire with normal precautions from a reasonable distance. Standard procedure for chemical fires. Wear full protective clothing and positive pressure self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	:	Obtain special instructions before use. Wear personal protective equipment. Wash thoroughly after handling.
Environmental precautions	:	Outside of normal use, avoid release to the environment.
Methods and materials for containment and cleaning up	:	Sweep up and shovel into suitable containers for disposal. Clean residue from spill site.

7. HANDLING AND STORAGE

Handling

Precautions for safe handling	:	Avoid contact with skin, eyes and clothing. For personal protection see section 8. Use only as directed. KEEP OUT OF REACH OF CHILDREN AND PETS. Do not handle until all safety precautions have been read and understood. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.
Advice on protection against fire and explosion	:	Normal measures for preventive fire protection.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Components	CAS-No.	mg/m3	ppm	Non-standard units	Basis
Stoddard solvent	8052-41-3	2,900 mg/m3	500 ppm	-	OSHA TWA
Stoddard solvent	8052-41-3	-	100 ppm	-	ACGIH TWA
Paraffin waxes and Hydrocarbon waxes	8002-74-2	2 mg/m3	-	-	ACGIH TWA
Ethyl Benzene	100-41-4	-	20 ppm	-	ACGIH TWA
Ethyl Benzene	100-41-4	435 mg/m3	100 ppm	-	OSHA TWA
NAPHTHALENE	91-20-3	50 mg/m3	10 ppm	-	OSHA TWA
NAPHTHALENE	91-20-3	-	10 ppm	-	ACGIH TWA
CUMENE	98-82-8	245 mg/m3	50 ppm	-	OSHA TWA
CUMENE	98-82-8	-	50 ppm	-	ACGIH TWA

Personal protective equipment

Respiratory protection : No special requirements.

Hand protection : No special requirements.

Eye protection : No special requirements.

Skin and body protection : No special requirements.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Odour Threshold	:	No data available
pH	:	Not applicable
Melting point/freezing point	:	Not applicable
Initial boiling point and boiling range	:	No data available
Flash point	:	31.1 °C 87.98 °F Method: Tag Closed Cup (TCC)
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper/lower flammability or explosive limits	:	No data available
Vapour pressure	:	No data available
Vapour density	:	No data available
Relative density	:	6.52 g/cm3 at 25 °C
Solubility(ies)	:	negligible
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available

Decomposition temperature	:	No data available
Viscosity, dynamic	:	Not applicable
Viscosity, kinematic	:	Not applicable
Oxidizing properties	:	No data available
Volatile Organic Compounds Total VOC (wt. %)*	:	80 % - additional exemptions may apply *as defined by US Federal and State Consumer Product Regulations
Other information	:	None identified

:

10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	:	Stable under recommended storage conditions.
Conditions to avoid	:	Direct sources of heat.
Incompatible materials	:	None known.
Hazardous decomposition products	:	Thermal decomposition can lead to release of irritating gases and vapours.

11. TOXICOLOGICAL INFORMATION

Emergency Overview	:	Danger
Acute oral toxicity	:	LD50 estimated > 5,000 mg/kg

Acute inhalation toxicity : No data available

Acute dermal toxicity : No data available

GHS Properties	Classification	Routes of entry
Acute toxicity	No classification proposed	-
Skin corrosion/irritation	No classification proposed	-
Serious eye damage/eye irritation	No classification proposed	-
Skin sensitisation	No classification proposed	-
Respiratory sensitisation	No classification proposed	-
Germ cell mutagenicity	No classification proposed	-
Carcinogenicity	Category 2	-
Reproductive toxicity	No classification proposed	-
Specific target organ toxicity - single exposure	No classification proposed	-
Specific target organ toxicity - repeated exposure	Category 1	-
Aspiration hazard	No classification proposed	-

Target Organs : Central nervous system

Aggravated Medical Condition : None known.

12. ECOLOGICAL INFORMATION

Product : The product itself has not been tested.

Toxicity
The ingredients in this formula have been reviewed and no adverse impact to the environment is expected when used according to label directions.

Toxicity to fish

Components	End point	Species	Value	Exposure time
Stoddard solvent	No data available			
Paraffin waxes and Hydrocarbon waxes	LC50	Fish	> 100 mg/l	
Ethyl Benzene	semi-static test LC50	Oncorhynchus mykiss (rainbow trout)	4.2 mg/l	96 h
NAPHTHALENE	static test LC50	Oncorhynchus mykiss (rainbow trout)	0.91 - 2.82 mg/l	96 h
CUMENE	LC50	Oncorhynchus mykiss (rainbow trout)	4.2 - 5.5 mg/l	96 h

Toxicity to aquatic invertebrates

Components	End point	Species	Value	Exposure time
Stoddard solvent	No data available			
Paraffin waxes and Hydrocarbon waxes	EC50 No data available NOEC	Daphnid Daphnia	> 10,000 mg/l 10 mg/l	
Ethyl Benzene	EC50	Daphnia magna (Water flea)	1.8 mg/l	48 h

	NOEC	Ceriodaphnia dubia	1 mg/l	7 d
NAPHTHALENE	static test EC50	Daphnia magna (Water flea)	1.09 - 3.4 mg/l	48 h
CUMENE				

Toxicity to aquatic plants

Components	End point	Species	Value	Exposure time
Stoddard solvent	No data available			
Paraffin waxes and Hydrocarbon waxes	NOEC No data available	Algae	> 100 mg/l	
Ethyl Benzene	Static EC50	Pseudokirchneriella subcapitata	2.6 - 11.3 mg/l	72 h
NAPHTHALENE	No data available			
CUMENE	No data available			

Persistence and degradability

Component	Biodegradation	Exposure time	Summary
Stoddard solvent	No data available		
Paraffin waxes and Hydrocarbon waxes	No data available		Not readily biodegradable.
Ethyl Benzene	70 - 80 %	28 d	Readily biodegradable
NAPHTHALENE	No data available		
CUMENE	No data available		

Bioaccumulative potential

Component	Bioconcentration factor (BCF)	Partition Coefficient n-Octanol/water (log)
Stoddard solvent	No data available	No data available
Paraffin waxes and Hydrocarbon waxes	No data available	No data available
Ethyl Benzene	1 Measured	3.6
NAPHTHALENE	No data available	No data available
CUMENE	No data available	No data available

Mobility

Component	End point	Value
Stoddard solvent	No data available	
Paraffin waxes and Hydrocarbon waxes	No data available	
Ethyl Benzene	Koc	1331 estimated
NAPHTHALENE	No data available	
CUMENE	Koc	884

PBT and vPvB assessment

Component	Results
Paraffin waxes and Hydrocarbon waxes	Not fulfilling PBT and vPvB criteria

Other adverse effects : None known.

13. DISPOSAL CONSIDERATIONS

Consumer may discard empty container in trash, or recycle where facilities exist.

14. TRANSPORT INFORMATION

Please refer to the Bill of Lading/receiving documents for up-to-date shipping information.

	Land transport	Sea transport	Air transport
UN number	1325	1325	1325
UN proper shipping name	UN 1325 Flammable Solid, Organic, N.O.S., 4.1, II	UN 1325 Flammable Solid, Organic, N.O.S., 4.1, II	UN 1325 Flammable Solid, Organic, N.O.S., 4.1, II
Transport hazard class(es)	4.1	4.1	4.1
Packing group	II	II	II
Environmental hazards	-	-	-
Special precautions for user	Limited quantities derogation may be applicable to this product, please check transport documents.	Limited quantities derogation may be applicable to this product, please check transport documents.	Limited quantities derogation may be applicable to this product, please check transport documents.

15. REGULATORY INFORMATION

Notification status : All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

Notification status : All ingredients of this product comply with the New Substances Notification requirements under the Canadian Environmental Protection Act (CEPA).

California Prop. 65 : This product is not subject to the reporting requirements under California's Proposition 65.

16. OTHER INFORMATION

HMIS Ratings

Health	1
Flammability	3
Reactivity	0

NFPA Ratings

Health	1
Fire	3
Reactivity	0
Special	-

This information is being provided in accordance with the Occupational Safety and Health Administration (OSHA) regulation (29 CFR 1910.1200). The information supplied is designed for workplaces where product use and frequency of exposure exceeds that established for the labeled consumer use.

Further information

This document has been prepared using data from sources considered to be technically reliable. It does not constitute a warranty, expressed or implied, as to the accuracy of the information contained herein. Actual conditions of use are beyond the seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Prepared by	SC Johnson Global Safety Assessment & Regulatory Affairs (GSARA)

NATIONAL CHEMICAL LABORATORIES, INC.

World Class Cleaning Solutions®

SAFETY DATA SHEET

Section 1 - Identification

Product Identifier	PATINA Stone Cleaner / Conditioner
Other means of identification	2504
Recommended use	Floor cleaner.
Recommended restrictions	For commercial and industrial use only.
Manufacturer / Importer / Supplier / Distributor Information	
Company Name	National Chemical Laboratories of PA, Inc.
Address	401 N. 10th Street - Philadelphia, PA 19123
Telephone	1 (215) 922-1200
Supplier Email	info@nclonline.com
Contact	CHEM-TEL
Emergency Phone	1 (800) 255-3924

Section 2 - Hazard(s) Identification

SDS Hazards and Warnings are based on the undiluted product. Refer to diluted SDS for Ready-To-Use Hazards and Warnings.

	Classification	Category	Target Organ
Physical Hazards	Not Classified		
Health Hazards	Serious eye damage/eye irritation	1	
	Skin corrosion/irritation	2	
OSHA defined hazards	Not Classified.		

Label Elements

Hazard Symbol

Signal Word	Danger
Hazard Statement	Causes skin irritation. Causes serious eye damage.
Precautionary statement	
Prevention	Wash thoroughly after handling. Wear protective gloves. Wear eye/face protection.
Response	If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC)	None known.

Section 3 - Composition/Information on ingredients

Mixture

Hazardous Components	Ingredient Name	CAS #	%
	9-octadecenoic acid (z)-, compd. with 2-aminoethanol (1:1)	2272-11-9	5 - 10
	D-Glucopyranose, oligomers, decyl octyl glycosides	68515-73-1	1 - 5

Section 4 - First-aid Measures

Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
Ingestion	Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately. Get medical attention if irritation develops and persists.
Most Important symptoms /effects, acute and delayed	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.

Indication of immediate medical attention and special treatment	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.
General Information	Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

Section 5 - Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO_2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment /instructions	Move containers from fire area if you can do it without risk.
General fire hazards	No unusual fire or explosion hazards noted.
Specific Methods	Use standard firefighting procedures and consider the hazards of other involved materials.

Section 6 - Accidental release measures

Personal precautions, protective equipment and emergency procedures.	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	This product is miscible in water. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water . Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

Section 7 - Handling and storage

Precautions for safe handling	Do not get this material in contact with eyes. Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wash hands thoroughly after handling. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

Section 8 - Exposure control/personal protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles) and a face shield.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Wear appropriate chemical resistant clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. No personal respiratory protective equipment normally required.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Section 9 - Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Clear, viscous liquid.
Color	Pale amber.
Odor	Pleasant (Sienna™)
Odor threshold	Not available.

pH (Concentrate)	9.6
Melting point/freezing point	Not available.
Initial boinging point and boiling range	212 °F (100 °C)
Flash point	> 212.0 °F (> 100.0 °C) Tag Closed Cup
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Similar to water.
Vapor density	Similar to water.
Relative density	1.01 ± 0.01
Relative density temperature	75 °F (23.89 °C)
Solubilities	100 % Soluble.
Partition Coefficient n-octanol/water	Not available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available
Viscosity	2000 cSt
Viscosity Temperature	75 °F (23.89 °C)

Section 10 - Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possiblity of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to Avoid	Contact with incompatible materials.
Incompatible materials	Peroxides. Phenols.
Hazardous Decomposition Products	No hazardous decomposition products are known.

Section 11 - Toxicological information

Information on likely routes of exposure	
Ingestion	May be harmful if swallowed.
Inhalation	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye damage.
Symptoms related to the physical, chemical and toxicological characteristics	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.
Information on toxicological effects.	
Acute toxicity	Not expected to be acutely toxic.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/ eye irritation	Causes serious eye damage.
Respiratory sensitization	This product is not expected to cause respiratory sensitization.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not classified.
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not classified.
Chronic effects	Prolonged exposure may cause chronic effects.

Section 12 - Ecological Information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Mobility in general	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

Section 13 - Disposal considerations

Disposal instructions	Dispose in accordance with applicable federal, state, and local regulations.
Local disposal regulations	Dispose of in accordance with local regulations.
Hazardous waste code	Waste codes should be assigned by the user based on the application for which the product was used.
Waste from residues / unused products	Dispose in accordance with all applicable regulations.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Section 14 - Transport information

DOT	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.
Transportation in bulk according to Annex II of MARPOL 73/78 and IBC Code	This substance/mixture is not intended to be transported in bulk.

Section 15 - Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR707, Subpt. D)	Not regulated.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	Not listed.
CERCLA Hazardous Substance List (40 CFR 302.4	Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard Categories	Immediate Hazard	Yes
	Delayed Hazard	No
	Fire Hazard	No
	Pressure Hazard	No
	Reactivity Hazard	No

SARA 302 Extremely hazardous substance	Not listed.
SARA 311/312 Hazardous chemical	Yes
SARA 313 (TRI reporting)	Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HSPs) List	Not regulated.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)	Not regulated.
Safe Drinking Water Act (SDWA)	Not regulated.
Food and Drug Administration (FDA)	Not regulated.

US state regulations California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US.Massachusetts RTK - Substance List	Not regulated.
US.New Jersey Worker and Community Right-to-Know Act	Not listed.
US.Pennsylvania RTK - Hazardous Substances	Not listed.
US.Rhode Island RTK	Not regulated.
US - California Propsition 65 - Carcinogens Reproductive Toxicity (CRT): Listed substance	Not listed.

International Inventories

Country(s) or region	Inventory Name	On Inventory (yes/no)*
Australia	**Australian Inventory of Chemical Substances (AICS)**	Yes
Canada	**Domestic Substances List (DSL)**	Yes
Canada	**Non-Domestic Substances List (NDSL)**	No
China	**Inventory of Existing Chemical Substances in China (IECSC)**	Yes
Europe	**European Inventory of Existing Commercial Chemical Substances (EINECS)**	Yes
Europe	**European List of Notifed Chemical Substances (ELINCS)**	No
Japan	**Inventory of Existing and New Chemical Substances (ENCS)**	Yes
Korea	**Existing Chemicals List (ECL)**	Yes

New Zealand	**New Zealand Inventory**	Yes
Philippines	**Philippine Inventory of Chemicals and Chemical Substances**	Yes
Unites States Puerto Rico	**Toxic Substances Control Act (TSCA) Inventory**	Yes

***A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).**

***A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).**

Section 16 - Other information, including date of preparation or last version

Issue date	10/30/2014
Version #	01
Disclaimer	The information contained herein was obtained from current and reliable sources. However, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions for use, handling, storage and disposal of this product are beyond the manufacturer's control, it is the user's responsibility both to determine safe conditions for use of this product and to assume liability for loss, injury, damage or expense arising from the product's improper use. No warranty, expressed or implied, regarding the product described herein shall be created by or inferred from any statement or omission in this SDS. Various government agencies may have specific regulations concerning the transportation, handling, storage, use or disposal of this product which may not be reflected in this SDS. The user should review these regulations to ensure full compliance.

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 302.00

Revision Date: September 22, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

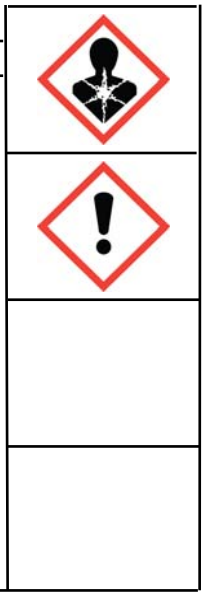
p-Dichlorobenzene

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 4). Harmful if swallowed (H302). Do not eat, drink or smoke when using this product (P270).

Hazard class: Serious eye damage or irritation (Category 2A). Causes serious eye irritation (H319).

Hazard class: Carcinogenicity (Category 2). Suspected of causing cancer (H351). Obtain special instructions before use (P201). Do not handle until all safety precautions have been read and understood (P202). Use personal protective equipment as required (P281). Possible human carcinogen (IARC-2B).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
p-Dichlorobenzene	106-46-7	$C_6H_4Cl_2$	147.01	
Synonym: 1,4-Dichlorobenzene				

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell (P301+P330+P312).

SECTION 5 — FIRE FIGHTING MEASURES

Class IIIA combustible solid.
Flash point: 66 °C
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
H-2
F-2
R-0

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all ignition sources and water . Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #4. Store with ethers, ketones, and halogenated hydrocarbons.
Store in a cool, dry place. Store in a Flinn Chem-Saf™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).
Exposure guidelines: PEL 75 ppm (OSHA), TLV 10 ppm (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless crystals. Penetrating moth ball odor.
Soluble: Many organic solvents. Insoluble in water.

Boiling point: 174 ^{o}C
Melting point: 53.1 ^{o}C
Refractive index: 1.5285
Specific gravity: 1.2475
Vapor pressure: 1.03 mm (25 ^{o}C)

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with oxidizers, aluminum, and its alloys.
Shelf life: Fair to poor, substance volatile. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Toxic and irritant.
Chronic effects: Possible carcinogen.
Target organs: Liver, kidneys, and lungs.

ORL-RAT LD_{50}: 500 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: 2 g/kg

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #4b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Environmentally hazardous substance, Solid, N.O.S. (para-dichlorobenzene). Hazard class: 9, Miscellaneous hazardous material. UN number: UN3077.
N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (203-400-5), RCRA code U072.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: September 22, 2014

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MATERIAL SAFETY DATA SHEET

SECTION I – IDENTITY AND RESPONSIBLE PARTY INFORMATION

Responsible Party: Eagle Maintenance Supply, Inc.

Product Name: Pearl RTU Cream Cleanser

Address: 80 Twinbridge Drive
Pennsauken, NJ 08110

Date Prepared: 7-1-97

Emergency Telephone No. And Other Information: 1-800-756-9022

Prepared By Regulatory Affairs Department

SECTION II – HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components

Specific Chemical Identity: Common Name(s)	CAS #'s	OSHA PEL	ACGIH TLV	Other Limits Recommended	% Optional
Silica (No respirable dust)	14808-60-7	0.1 mg/M^3	0.1 mg/M^3	N/A	>20%
Dodecylbenzylsulfonic Acid	27176-87-0	N/A	N/A	N/A	5-10
Nonoxynol	9016-45-9	N/A	N/A	N/A	5-10

***THIS CHEMICAL IS SUBJECT TO THE REPORTING REQUIREMENTS FOR SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372.**

HMIS RATING - HEALTH: 2 FLAMMABILITY: 0 REACTIVITY: 0 PERSONAL PROTECTION EQPT: B

SECTION III – PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: Approx 212° F
Vapor Pressure (mm Hg): N/E
PH (conc.): 1.4-2.0
Solubility in Water: Insoluble

Specific Gravity (H_2O = 1): 1.250
Percent Volatile By Weight (%): <50%
Evaporation Rate (H_2O=1): Approx. 1
Appearance and Fragrance: White Creme / Mint Odor

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used) – None

Flammable Limits – LEL – N/A UEL – N/A

Extinguishing Media – Water, CO_2, Foam or media suitable for surrounding fire.

Special Fire Fighting Procedures – Standard fire fighting procedures may be followed, including full protective gear, NIOSH approved self-contained breathing apparatus. Unusual Fire and Explosion Hazards – None Known

SECTION V – PHYSICAL HAZARDS

Stability: Unstable / Stable **X**

Conditions to Avoid – None Known

Incompatibility (Materials to Avoid) – Do not mix with other chemicals.

Hazardous Decomposition Products or By-products – Thermal decomposition on burning may produce toxic vapors or gases.

Hazardous Polymerization: May Occur / Will not Occur **X**

Conditions to Avoid – None Known

SECTION VI – HEALTH HAZARDS

Route(s) of Entry: Inhalation? Skin? **X** Ingestion? **X**

Health Hazards (1. Acute and 2. Chronic) – **1. ACUTE:** Harmful if swallowed. Eye and skin irritant. May cause permanent damage, especially to eyes.
2. CHRONIC: None Known.

Chemical Listed as Carcinogen or Potential Carcinogen	National Toxicology Program	Yes / No **X**	I.A.R.C. Monographs	Yes / No **X**	OSHA	Yes / No **X**

Signs and Symptoms of Exposure – Irritation or burning sensation.

Medical Conditions Generally Aggravated by Exposure – May aggravate skin disorders or respiratory ailments.

Emergency and First Aid Procedures – **EYE CONTACT:** Flush Immediately with water for 15 minutes. Get medical attention. **SKIN CONTACT:** Flush with water for 15 minutes. Remove and wash contaminated clothing. **IINGESTION:** Rinse mouth with water. Then drink 1-2 glasses of water. Never give anything by mouth to an unconscious person. Get immediate medical attention.

SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be Taken in Case Material is Released or Spilled – Wear appropriate protective equipment. If possible, contain spill and collect in approved container. Rinse affected area thoroughly with water. Keep product out of sewers or waterways. Hold for disposal.

Waste Disposal Method – Dispose of in accordance with local, state and federal regulations. If possible, triple rinse container, and recycle.

Precautions to be Taken in Handling and Storing – Avoid contact with skin or eyes. Avoid breathing vapor, spray or mist. Store in original container, in cool dry place with adequate ventilation. Keep out of reach of children. Keep container tightly closed when not in use.

Other Precautions – Use only according to label directions. If unsure about safe use, contact your supervisor immediately.

SECTION VIII – CONTROL MEASURES

Respiratory Protection (Specify Type) – Not expected to be necessary under normal conditions of use. Where exposure cannot be adequately controlled by general or local ventilation, use appropriate respiratory protection to prevent over exposure. An approved dust/mist respirator would be recommended.

Ventilation – **X** Local Exhaust – As Necessary Mechanical (General) – As Adequate Special – N/A Other – N/A

Protective Gloves – Water Impervious (Latex, Neoprene) Eye Protection – Chemical Resistant Goggles or Face Shield Other Protective Clothing or Equipment - Not Required Eye wash recommended. Work/Hygiene Practices – Follow OSHA mandated procedures. Never eat or smoke while working with chemicals. Good housekeeping practices apply. Wash thoroughly after handling.

NOTICE: NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY OTHER NATURE, ARE MADE WITH RESPECT TO INFORMATION CONCERNING THE PRODUCT REFERRED TO IN THIS MATERIAL SAFETY DATA SHEET.

The goal of defining precisely, in measurable terms, every possible health effect that may occur in the workplace as a result of chemical exposures cannot realistically be accomplished. The information and recommendation contained in this Material Safety Data Sheet are supplied pursuant to 29 C.F.R. 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. The information and recommendations set forth herein are presented in good faith and believed to be correct as of the date hereof. Canberra Corporation, however, makes no representations as to the completeness or accuracy thereof, and information is supplied upon the express condition that the persons receiving the same will be required to make their own determination as to its suitability for their purposes prior to use. In no event will Canberra Corporation be responsible for any damages of any nature whatsoever resulting from the use of, reliance upon, or the misuse of this information. The information as supplied herein is simply to be informative and intended solely to alert the user of the substance which is the subject matter of this Material Safety Data Sheet. The ultimate compliance with federal, state and local regulations concerning the use or disposal of this compound, or compliance with respect to products liability, rests solely upon the purchaser thereof.

N/A (Not Applicable/Not Available) N/E (Not Established)

SAFETY DATA SHEET

Issue Date 01-Jan-2008 **Revision Date** 3-Mar-2015 **Version** 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name Peel Away 1

Other Means of Identification

SDS # DCI-009

UN/ID No UN1823

Recommended Use of the Chemical and Restrictions on Use

Recommended Use Paint remover.

Details of the Supplier of the Safety Data Sheet

Supplier Address
Dumond Chemicals, Inc.
83 General Warren Blvd
Suite 190
Malvern, PA 19355

Emergency Telephone Number

Company Phone Number 1-609-655-7700
Emergency Telephone INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

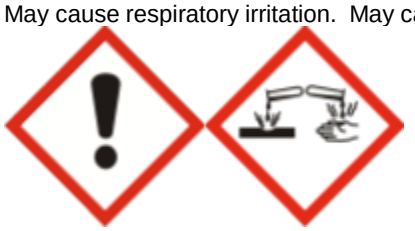
2. HAZARDS IDENTIFICATION

Classification

Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3

Signal Word
Danger

Hazard Statements
Causes severe skin burns and eye damage
May cause respiratory irritation. May cause drowsiness or dizziness



Appearance White paste **Physical State** Paste **Odor** None

Precautionary Statements - Prevention
Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Use only outdoors or in a well-ventilated area

Precautionary Statements - Response
Immediately call a POISON CENTER or doctor/physician
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician
Call a POISON CENTER or doctor/physician if you feel unwell
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Family Alkaline.

Chemical Name	CAS No	Weight-%
Calcium hydroxide	1305-62-0	21
Magnesium hydroxide	1309-42-8	16
Sodium hydroxide	1310-73-2	9
Water	N/A	46

4. FIRST AID MEASURES

First Aid Measures

Inhalation Remove to fresh air. Immediate medical attention is required.

Eye Contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Call a physician immediately.

Ingestion If conscious, give water or milk. Do NOT induce vomiting. Get medical attention if necessary.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention if irritation occurs.

Most Important Symptoms and Effects, both Acute and Delayed

Symptoms May cause dermatitis or irritation in some individuals upon prolonged contact. May cause severe chemical burns with reddening and pain. Causes eye irritation. Causes skin irritation. May cause irritation to the mucous membranes and upper respiratory tract. Ingestion may cause severe burns to mouth, throat or stomach.

Indication of any Immediate Medical Attention and Special Treatment Needed

Note to Physicians Treat symptomatically. Individuals with chronic respiratory or skin diseases may be at risk from exposure.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical
At elevated temperatures, containers may rupture. Contents are corrosive and all personal contact must be avoided.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers with flooding quantities of water until well after fire is out.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions Use personal protective equipment as required.

Environmental Precautions Do not allow into any sewer, on the ground or into any body of water.

Methods and Material for Containment and Cleaning Up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Keep in suitable, closed containers for disposal. Wash spill area with plenty of water. Spills and releases may have to be reported to Federal and/or local authorities. See section 15.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Wash face, hands, and any exposed skin thoroughly after handling. Do not breathe dust/fume/gas/mist/vapors/spray. Use only in well-ventilated areas.

Conditions for Safe Storage, Including any Incompatibilities

Storage Conditions Store in a cool, well ventilated area away from acids and other incompatible substances. Store locked up.

Incompatible Materials Acids. Organic halogen compounds. Nitromethane. Flammable liquid. Metals such as aluminum, tin, and zinc.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH

Calcium hydroxide 1305-62-0	TWA: 5 mg/m³	TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 5 mg/m³ not in effect as a result of reconsideration	TWA: 5 mg/m³
Sodium hydroxide 1310-73-2	Ceiling: 2 mg/m³	TWA: 2 mg/m³ (vacated) Ceiling: 2 mg/m³	IDLH: 10 mg/m³ Ceiling: 2 mg/m³

Appropriate Engineering Controls

Engineering Controls Apply technical measures to comply with the occupational exposure limits. Use in a well-ventilated location (eg. local exhaust ventilation, fans). Showers. Eyewash stations.

Individual Protection Measures, such as Personal Protective Equipment

Eye/Face Protection Chemical safety goggles/faceshield.

Skin and Body Protection Wear suitable protective clothing. Rubber, neoprene, or other impervious gloves are recommended to prevent skin contact. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory Protection Ensure adequate ventilation, especially in confined areas. For spray application, a NIOSH approved dust respirator and eye protection.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	Paste		
Appearance	White paste	**Odor**	None
Color	White	**Odor threshold**	Not determined

Property	**Values**	**Remarks • Method**
pH	12	
Melting point/freezing point	Not determined	
Boiling point/boiling range	> 100 °C / >212 °F	
Flash point	None	
Evaporation rate	Same as water	
Flammability (solid, gas)	Not determined	
Flammability limits in air		
Upper flammability limits	Not applicable	
Lower flammability limit	Not applicable	
Vapor pressure	Same as water	@ 20 C
Vapor density	Same as water	
Specific gravity	1.33	
Water solubility	Completely soluble	
Solubility in other solvents	Not determined	
Partition coefficient	Not determined	
Autoignition temperature	None	
Decomposition temperature	Not determined	
Kinematic viscosity	Not determined	
Dynamic viscosity	Not determined	
Explosive properties	Not determined	
Oxidizing Properties	Not determined	

Other Information

VOC Content (%) 0%

VOC Content 0 lbs/gal

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Conditions to Avoid
Keep out of reach of children.

Incompatible Materials
Acids. Organic halogen compounds. Nitromethane. Flammable liquid. Metals such as aluminum, tin, and zinc.

Hazardous Decomposition Products
None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Product Information

Inhalation Avoid breathing vapors or mists.

Eye Contact Causes severe eye damage.

Skin Contact Causes severe skin burns.

Ingestion Do not taste or swallow.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	> 90 mL/kg (Rat)	-	-
Calcium hydroxide 1305-62-0	= 7340 mg/kg (Rat)	-	-
Magnesium hydroxide 1309-42-8	= 8500 mg/kg (Rat)	-	-
Sodium hydroxide 1310-73-2	-	= 1350 mg/kg (Rabbit)	-

Information on Physical, Chemical and Toxicological Effects

Symptoms May cause dermatitis or irritation in some individuals upon prolonged contact. May cause severe chemical burns with reddening and pain. May cause skin and eye irritation. May cause irritation to the mucous membranes and upper respiratory tract. May cause burns to mouth and gastrointestinal corrosion.

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure

Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

STOT - single exposure May cause respiratory irritation. May cause drowsiness or dizziness.

Numerical Measures of Toxicity- Product
Not determined

The following values are calculated based on chapter 3.1 of the GHS document .
ATEmix (oral) 21097 mg/kg
ATEmix (dermal) 9445 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Calcium hydroxide 1305-62-0		160: 96 h Gambusia affinis mg/L LC50 static		
Sodium hydroxide 1310-73-2		45.4: 96 h Oncorhynchus mykiss mg/L LC50 static		

Persistence and Degradability
Not determined.

Bioaccumulation
Not determined.

Mobility
Not determined.

Other Adverse Effects Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

Chemical Name	California Hazardous Waste Status
Calcium hydroxide 1305-62-0	Corrosive
Sodium hydroxide 1310-73-2	Toxic Corrosive

14. TRANSPORT INFORMATION

Note Based on package size, product may be eligible for limited quantity exception

DOT

UN/ID No	UN1823
Proper Shipping Name	Sodium hydroxide, solid, mixture
Hazard Class	8
Packing Group	II

IATA

UN/ID No	UN1823
Proper Shipping Name	Sodium hydroxide, solid, mixture
Hazard Class	8
Packing Group	II

IMDG

UN/ID No	UN1823
Proper Shipping Name	Sodium hydroxide, solid, mixture
Hazard Class	8
Packing Group	II

15. REGULATORY INFORMATION

International Inventories

Legend:
TSCA *- United States Toxic Substances Control Act Section 8(b) Inventory*
DSL/NDSL *- Canadian Domestic Substances List/Non-Domestic Substances List*
EINECS/ELINCS *- European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*
ENCS *- Japan Existing and New Chemical Substances* ***IECSC***
- China Inventory of Existing Chemical Substances ***KECL*** *-*
Korean Existing and Evaluated Chemical Substances
PICCS *- Philippines Inventory of Chemicals and Chemical Substances*

US Federal Regulations

SARA 311/312 Hazard Categories

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hydroxide 1310-73-2	1000 lb			X

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Sodium hydroxide 1310-73-2	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

US State Regulations

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Calcium hydroxide 1305-62-0	X	X	X
Sodium hydroxide 1310-73-2	X	X	X

U.S. EPA Label Information

16. OTHER INFORMATION

NFPA	**Health Hazards**	**Flammability**	**Instability**	**Special Hazards**
	Not determined	Not determined	Not determined	Not determined
HMIS	**Health Hazards**	**Flammability**	**Physical Hazards**	**Personal Protection**
	3	0	0	Not determined

Issue Date	01-Jan-2008
Revision Date	12-Dec-2012
Revision Note	New format

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Material Safety Data Sheet

1. MATERIAL AND COMPANY IDENTIFICATION

Material Name : **Pennzoil SAE 5W-30 Motor Oil**
Uses : Engine oil.

Manufacturer/Supplier : **SOPUS Products**
700 Milam
Houston TX 77002-2806
USA

MSDS Request :

Emergency Telephone Number
Spill Information : 877-242-7400
Health Information : 877-504-9351

2. COMPOSITION/INFORMATION ON INGREDIENTS

Highly refined mineral oils and additives.
The highly refined mineral oil contains <3% (w/w) DMSO-extract, according to IP346.

3. HAZARDS IDENTIFICATION

Emergency Overview

Appearance and Odour : Amber. Liquid at room temperature. Slight hydrocarbon.

Health Hazards : Not classified as dangerous for supply or conveyance.
Safety Hazards : Not classified as flammable but will burn.
Environmental Hazards : Not classified as dangerous for the environment.

Health Hazards : Not expected to be a health hazard when used under normal conditions.

Health Hazards
Inhalation : Under normal conditions of use, this is not expected to be a primary route of exposure.
Skin Contact : Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.
Eye Contact : May cause slight irritation to eyes.
Ingestion : Low toxicity if swallowed.
Other Information : Used oil may contain harmful impurities.
Signs and Symptoms : Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Ingestion may result in nausea, vomiting and/or diarrhoea.
Aggravated Medical Condition : Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Skin.
Environmental Hazards : Not classified as dangerous for the environment.
Additional Information : Under normal conditions of use or in a foreseeable emergency,

this product does not meet the definition of a hazardous chemical when evaluated according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

4. FIRST AID MEASURES

General Information	:	Not expected to be a health hazard when used under normal conditions.
Inhalation	:	No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
Skin Contact	:	Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.
Eye Contact	:	Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.
Ingestion	:	In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.
Advice to Physician	:	Treat symptomatically.

5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

Flash point	:	> 230 °C / 446 °F (COC)
Upper / lower Flammability or Explosion limits	:	Typical 1 - 10 %(V)(based on mineral oil)
Auto ignition temperature	:	> 320 °C / 608 °F
Specific Hazards	:	Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds.
Suitable Extinguishing Media	:	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable Extinguishing Media	:	Do not use water in a jet.
Protective Equipment for Firefighters	:	Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on disposal. Observe all relevant local and international regulations.

Protective measures	:	Avoid contact with skin and eyes. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Clean Up Methods	:	Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an

		absorbent. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly.
Additional Advice	:	Local authorities should be advised if significant spillages cannot be contained.

7. HANDLING AND STORAGE

General Precautions	:	Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
Handling	:	Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used.
Storage	:	Keep container tightly closed and in a cool, well-ventilated place. Use properly labelled and closeable containers. Storage Temperature: 0 - 50 °C / 32 - 122 °F
Recommended Materials	:	For containers or container linings, use mild steel or high density polyethylene.
Unsuitable Materials	:	PVC.
Additional Information	:	Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Material	Source	Type	ppm	mg/m3	Notation
Oil mist, mineral	ACGIH	TWA(Mist.)		5 mg/m3	
Oil mist, mineral	ACGIH	STEL(Mist.)		10 mg/m3	

Exposure Controls	:	The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control airborne concentrations. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.
Personal Protective Equipment	:	Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.
Respiratory Protection	:	No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne

		concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapours [boiling point >65°C(149 °F)].
Hand Protection	:	Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.
Eye Protection	:	Wear safety glasses or full face shield if splashes are likely to occur.
Protective Clothing	:	Skin protection not ordinarily required beyond standard issue work clothes.
Monitoring Methods	:	Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.
Environmental Exposure Controls	:	Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Amber. Liquid at room temperature.
Odour	:	Slight hydrocarbon.
pH	:	Not applicable.
Initial Boiling Point and Boiling Range	:	> 280 °C / 536 °F estimated value(s)
Pour point	:	Typical -34.45 °C / -30.01 °F
Flash point	:	> 230 °C / 446 °F (COC)
Upper / lower Flammability or Explosion limits	:	Typical 1 - 10 %(V) (based on mineral oil)
Auto-ignition temperature	:	> 320 °C / 608 °F
Vapour pressure	:	< 0.5 Pa at 20 °C / 68 °F (estimated value(s))
Specific gravity	:	Typical 0.88
Density	:	0.880 g/cm3
Water solubility	:	Negligible.
n-octanol/water partition coefficient (log Pow)	:	> 6 (based on information on similar products)
Kinematic viscosity	:	20 - 30 mm2/s at 40 °C / 104 °F

Vapour density (air=1)	:	> 1 (estimated value(s))
Evaporation rate (nBuAc=1)	:	Data not available

10. STABILITY AND REACTIVITY

Stability	:	Stable.
Conditions to Avoid	:	Extremes of temperature and direct sunlight.
Materials to Avoid	:	Strong oxidising agents.
Hazardous Decomposition Products	:	Hazardous decomposition products are not expected to form during normal storage.

11. TOXICOLOGICAL INFORMATION

Basis for Assessment	:	Information given is based on data on the components and the toxicology of similar products.
Acute Oral Toxicity	:	Expected to be of low toxicity: LD50 > 5000 mg/kg , Rat
Acute Dermal Toxicity	:	Expected to be of low toxicity: LD50 > 5000 mg/kg , Rabbit
Acute Inhalation Toxicity	:	Not considered to be an inhalation hazard under normal conditions of use.
Skin Irritation	:	Expected to be slightly irritating. Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.
Eye Irritation	:	Expected to be slightly irritating.
Respiratory Irritation	:	Inhalation of vapours or mists may cause irritation.
Sensitisation	:	Not expected to be a skin sensitiser.
Repeated Dose Toxicity	:	Not expected to be a hazard.
Mutagenicity	:	Not considered a mutagenic hazard.
Carcinogenicity	:	Product contains mineral oils of types shown to be non-carcinogenic in animal skin-painting studies. Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC). Other components are not known to be associated with carcinogenic effects.
Reproductive and Developmental Toxicity	:	Not expected to be a hazard.
Additional Information	:	Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the environment on disposal. ALL used oil should be handled with caution and skin contact avoided as far as possible. Continuous contact with used engine oils has caused skin cancer in animal tests.

12. ECOLOGICAL INFORMATION

Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products.

Acute Toxicity	:	Poorly soluble mixture. May cause physical fouling of aquatic organisms. Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l (to aquatic organisms) (LL/EL50 expressed as the

nominal amount of product required to prepare aqueous test extract). Mineral oil is not expected to cause any chronic effects to aquatic organisms at concentrations less than 1 mg/l.

Mobility : Liquid under most environmental conditions. Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.

Persistence/degradability : Expected to be not readily biodegradable. Major constituents are expected to be inherently biodegradable, but the product contains components that may persist in the environment.

Bioaccumulation : Contains components with the potential to bioaccumulate.

Other Adverse Effects : Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

13. DISPOSAL CONSIDERATIONS

Material Disposal : Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses.

Container Disposal : Dispose in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.

Local Legislation : Disposal should be in accordance with applicable regional, national, and local laws and regulations.

14. TRANSPORT INFORMATION

US Department of Transportation Classification (49CFR)
This material is not subject to DOT regulations under 49 CFR Parts 171-180.

IMDG
This material is not classified as dangerous under IMDG regulations.

IATA (Country variations may apply)
This material is not classified as dangerous under IATA regulations.

15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Federal Regulatory Status

Notification Status

EINECS	All components listed or polymer exempt.
TSCA	All components listed.
DSL	All components listed.

Shell classifies this material as an "oil" under the CERCLA Petroleum Exclusion, therefore releases to the environment are not reportable under CERCLA.

SARA Hazard Categories (311/312)
No SARA 311/312 Hazards.

SARA Toxic Release Inventory (TRI) (313)

Zinc alkyl dithiophosphate	(68649-42-3)	0.90%

State Regulatory Status

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

This material does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

New Jersey Right-To-Know Chemical List

Zinc alkyl dithiophosphate	(68649-42-3)	Listed.

16. OTHER INFORMATION

NFPA Rating (Health, Fire, Reactivity)	:	0, 1, 0
MSDS Version Number	:	1.0
MSDS Effective Date	:	02/26/2010
MSDS Revisions	:	A vertical bar (|) in the left margin indicates an amendment from the previous version.
MSDS Regulation	:	The content and format of this MSDS is in accordance with the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
MSDS Distribution	:	The information in this document should be made available to all who may handle the product.
Disclaimer	:	The information contained herein is based on our current

knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty or guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product.

Material Safety Data Sheet

1. MATERIAL AND COMPANY IDENTIFICATION

Material Name : **Pennzoil® High Mileage Automatic Transmission Fluid**

Manufacturer/Supplier : **SOPUS Products**
PO BOX 4427
Houston, TX 77210-4427
USA

MSDS Request : 877-276-7285

Emergency Telephone Number
Spill Information : 877-242-7400
Health Information : 877-504-9351

2. COMPOSITION/INFORMATION ON INGREDIENTS

Highly refined mineral oils and additives.
The highly refined mineral oil contains <3% (w/w) DMSO-extract, according to IP346.

3. HAZARDS IDENTIFICATION

Emergency Overview

Appearance and Odour : Dark red. Liquid at room temperature. Slight hydrocarbon.

Health Hazards : Not classified as dangerous for supply or conveyance.
Safety Hazards : Not classified as flammable but will burn.
Environmental Hazards : Not classified as dangerous for the environment.

Health Hazards : Not expected to be a health hazard when used under normal conditions.

Health Hazards
Inhalation : Under normal conditions of use, this is not expected to be a primary route of exposure.
Skin Contact : Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.
Eye Contact : May cause slight irritation to eyes.
Ingestion : Low toxicity if swallowed.
Other Information : Used oil may contain harmful impurities.

Signs and Symptoms : Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Ingestion may result in nausea, vomiting and/or diarrhoea.

Aggravated Medical Condition : Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Skin.

Environmental Hazards : Not classified as dangerous for the environment.

Additional Information : Under normal conditions of use or in a foreseeable emergency, this product does not meet the definition of a hazardous

chemical when evaluated according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

4. FIRST AID MEASURES

General Information	:	Not expected to be a health hazard when used under normal conditions.
Inhalation	:	No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
Skin Contact	:	Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.
Eye Contact	:	Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.
Ingestion	:	In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.
Advice to Physician	:	Treat symptomatically.

5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

Flash point	:	Typical 350 °C / 662 °F (COC)
Upper / lower Flammability or Explosion limits	:	Typical 1 - 10 %(V)(based on mineral oil)
Auto ignition temperature	:	> 320 °C / 608 °F
Specific Hazards	:	Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds.
Suitable Extinguishing Media	:	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable Extinguishing Media	:	Do not use water in a jet.
Protective Equipment for Firefighters	:	Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on disposal. Observe all relevant local and international regulations.

Protective measures	:	Avoid contact with skin and eyes. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Clean Up Methods	:	Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay,

sand or other suitable material and dispose of properly.

Additional Advice : Local authorities should be advised if significant spillages cannot be contained.

7. HANDLING AND STORAGE

General Precautions : Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

Handling : Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used.

Storage : Keep container tightly closed and in a cool, well-ventilated place. Use properly labelled and closeable containers. Storage Temperature: 0 - 50 °C / 32 - 122 °F

Recommended Materials : For containers or container linings, use mild steel or high density polyethylene.

Unsuitable Materials : PVC.

Additional Information : Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Material	Source	Type	ppm	mg/m3	Notation
Oil mist, mineral	ACGIH	TWA(Mist.)		5 mg/m3	
Oil mist, mineral	ACGIH	STEL(Mist.)		10 mg/m3	

Exposure Controls : The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control airborne concentrations. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

Personal Protective Equipment : Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Respiratory Protection : No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker

		health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapours [boiling point >65 °C (149 °F)].
Hand Protection	:	Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.
Eye Protection	:	Wear safety glasses or full face shield if splashes are likely to occur.
Protective Clothing	:	Skin protection not ordinarily required beyond standard issue work clothes.
Monitoring Methods	:	Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.
Environmental Exposure Controls	:	Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Dark red. Liquid at room temperature.
Odour	:	Slight hydrocarbon.
pH	:	Not applicable.
Initial Boiling Point and Boiling Range	:	> 280 °C / 536 °F estimated value(s)
Pour point	:	Typical -55 °C / -67 °F
Flash point	:	Typical 350 °C / 662 °F (COC)
Upper / lower Flammability or Explosion limits	:	Typical 1 - 10 %(V) (based on mineral oil)
Auto-ignition temperature	:	> 320 °C / 608 °F
Vapour pressure	:	< 0.5 Pa at 20 °C / 68 °F (estimated value(s))
Specific gravity	:	Typical 0.885
Density	:	Typical 7.49 g/cm3
Water solubility	:	Negligible.
n-octanol/water partition coefficient (log Pow)	:	> 6 (based on information on similar products)
Kinematic viscosity	:	Typical 400 mm2/s at 40 °C / 104 °F
Vapour density (air=1)	:	> 1 (estimated value(s))

Evaporation rate (nBuAc=1)	:	Data not available

10. STABILITY AND REACTIVITY

Stability	:	Stable.
Conditions to Avoid	:	Extremes of temperature and direct sunlight.
Materials to Avoid	:	Strong oxidising agents.
Hazardous Decomposition Products	:	Hazardous decomposition products are not expected to form during normal storage.

11. TOXICOLOGICAL INFORMATION

Basis for Assessment	:	Information given is based on data on the components and the toxicology of similar products.
Acute Oral Toxicity	:	Expected to be of low toxicity: LD50 > 5000 mg/kg , Rat
Acute Dermal Toxicity	:	Expected to be of low toxicity: LD50 > 5000 mg/kg , Rabbit
Acute Inhalation Toxicity	:	Not considered to be an inhalation hazard under normal conditions of use.
Skin Irritation	:	Expected to be slightly irritating. Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.
Eye Irritation	:	Expected to be slightly irritating.
Respiratory Irritation	:	Inhalation of vapours or mists may cause irritation.
Sensitisation	:	Not expected to be a skin sensitiser.
Repeated Dose Toxicity	:	Not expected to be a hazard.
Mutagenicity	:	Not considered a mutagenic hazard.
Carcinogenicity	:	Product contains mineral oils of types shown to be non-carcinogenic in animal skin-painting studies. Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC). Other components are not known to be associated with carcinogenic effects.
Reproductive and Developmental Toxicity	:	Not expected to be a hazard.
Additional Information	:	Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the environment on disposal. ALL used oil should be handled with caution and skin contact avoided as far as possible.

12. ECOLOGICAL INFORMATION

Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products.

Acute Toxicity	:	Poorly soluble mixture. May cause physical fouling of aquatic organisms. Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l (to aquatic organisms) (LL/EL50 expressed as the nominal amount of product required to prepare aqueous test extract). Mineral oil is not expected to cause any chronic effects to aquatic organisms at concentrations less than 1 mg/l.

Mobility	:	Liquid under most environmental conditions. Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.
Persistence/degradability	:	Expected to be not readily biodegradable. Major constituents are expected to be inherently biodegradable, but the product contains components that may persist in the environment.
Bioaccumulation	:	Contains components with the potential to bioaccumulate.
Other Adverse Effects	:	Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

13. DISPOSAL CONSIDERATIONS

Material Disposal	:	Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses.
Container Disposal	:	Dispose in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.
Local Legislation	:	Disposal should be in accordance with applicable regional, national, and local laws and regulations.

14. TRANSPORT INFORMATION

US Department of Transportation Classification (49CFR)
This material is not subject to DOT regulations under 49 CFR Parts 171-180.

IMDG
This material is not classified as dangerous under IMDG regulations.

IATA (Country variations may apply)
This material is not classified as dangerous under IATA regulations.

15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Federal Regulatory Status

Notification Status

EINECS	All components listed.
TSCA	All components listed.
DSL	All components listed.

SARA Hazard Categories (311/312)
No SARA 311/312 Hazards.

State Regulatory Status

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

This material does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

16. OTHER INFORMATION

NFPA Rating (Health, Fire, Reactivity)	:	0, 1, 0
MSDS Version Number	:	2.0
MSDS Effective Date	:	07/08/2008
MSDS Revisions	:	A vertical bar (|) in the left margin indicates an amendment from the previous version.
MSDS Regulation	:	The content and format of this MSDS is in accordance with the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
MSDS Distribution	:	The information in this document should be made available to all who may handle the product.
Disclaimer	:	The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty or guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product.

MATERIAL SAFETY DATA SHEET

PENNZOIL® ROADSIDE™ FIX-A-FLAT®

1. PRODUCT AND COMPANY IDENTIFICATION

MSDS Number: 13380
Version Date: 9/6/2002

Product Name: PENNZOIL® ROADSIDE™ FIX-A-FLAT®
Product Use: Seal & inflate automotive tires
Synonyms: PENNZOIL® ROADSIDE™ SUPER FIX-A-FLAT®, S410, S420, S430

Manufacturer
Pennzoil-Quaker State Company
P.O. Box 2967
Houston, TX 772522967
USA

Phone Numbers
Medical Emergency: 1-800-546-6040
Transportation Emergency (USA): 1-800-468-1263
Transportation Emergency (International): 1-352-323-3500 (Call Collect)
MSDS Assistance: 1-800-546-6227
Fax On Demand: 1-800-546-6227
Technical Assistance: 1-800-416-1600
Customer Service: 1-800-468-8397
Fax Number: 713-217-3181
Internet Address: www.MSDS.PZLQS.com

2. COMPONENT INFORMATION

Component	CAS No.	Weight Percent Range	Hazardous in Blend
WATER	7732-18-5	30 - 60	No
TETRAFLUOROETHANE	811-97-2	10 - 55	Yes
HEAVY AROMATIC SOLVENT NAPHTHA	64742-94-5	10 - 50	Yes
AMORPHOUS POLYOLEFIN	MIXTURE	< 15	No
AROMATIC RESIN	MIXTURE	< 10	No
INERT FILLER	MIXTURE	< 7	No
EMULSIFIER	TRADESECRET	1 - 8	No

This product is **HAZARDOUS** according to OSHA 29 CFR 1910.1200.
Hazards:
Flammable/Combustible ___ **Acute Toxin** X **Chronic Toxin** ___ **Carcinogen** ___
Pressure X **Reactive** ___ **Exposure Limit** X **Target Organ** ___ **Other** ___

Other: No information available

3. HAZARDS IDENTIFICATION

Emergency and Hazards Overview
DANGER: HARMFUL OR FATAL IF SWALLOWED. CONTENTS UNDER PRESSURE. MAY CAUSE EYE IRRITATION.

NFPA Ratings: **Health** 1 **Flammability** 1 **Reactivity** 0

Primary Route of Exposure: **Skin** X **Inhalation** X **Eye** ___

Health Effect Information

Eye Contact: Avoid eye contact. Exposure to mists and vapors may be irritating to the eyes. May be irritating to the eyes upon direct contact.

Skin Contact: Avoid skin contact. May be absorbed through skin. This product may cause skin irritation upon direct contact. Prolonged or repeated skin contact may result in dryness, chapping, and reddening.

Inhalation: Not applicable by this route of exposure. This product is not expected to pose an inhalation hazard under conditions of foreseeable use. Exposure to mist/vapors may be irritating to respiratory tract. Exposure to high concentrations can cause cardiac sensitization.

Ingestion: Ingestion is unlikely for aerosol products. This product is regarded as having a low order of toxicity.

Medical Conditions Aggravated by Exposure: Drying and chapping may make the skin more susceptible to other irritants, sensitizers and disease.

Other: No information available

4. FIRST AID INFORMATION

Eye Contact: Immediately flush eyes with large amounts of water and continue flushing until irritation subsides. If irritation persists, seek medical attention.

Skin Contact: Wash contaminated area thoroughly with soap and water. If redness or irritation occurs and persists, seek medical attention.

Inhalation: No treatment is necessary under ordinary circumstances. If victim exhibits signs of vapor intoxication remove to fresh air. If discomfort persists seek medical attention.

Ingestion: Ingestion is unlikely for aerosol products. Accidental spraying into the mouth will not result in any harmful effects. Do not induce vomiting due to aspiration hazard.

Notes to Physician: Because of possible disturbances of cardiac rhythm, catecholamine drugs such as epinephrine, should be used with caution, and only in emergency situations.

Other: No information available

5. FIRE AND EXPLOSION INFORMATION

Flammable Properties

Flash Point (aerosol concentrate): None	**Test Method:** ASTM D 3828-81-Setaflash
Flash Point (aerosol concentrate): None	**Test Method:** No information available
Flame Extension: 0", no flashback	**Test Method:** CPSC 1500.45
Flammable Limits in Air	
Upper Percent: No data available	
Lower Percent: No data available	
Autoignition Temperature: No data available	**Test Method:** No information available

NFPA Classification: Water-based product - not applicable

Extinguishing Media: This material is nonflammable as manufactured.

Fire Fighting Measures

Special Fire Fighting Procedures and Equipment: This material is nonflammable.

Unusual Fire and Explosion Conditions: Caution! Contents are under pressure and can explode when exposed to heat or flames. Pressurized container: Protect from sunlight and do not expose to temperatures exceeding 50 C. Do not pierce or burn even after container is empty.

Hazardous Combustion By-Products: No information available

Other: No information available

6. ACCIDENTAL RELEASE MEASURES

Personnel Safeguards: Consult Health Effect Information in Section 3, Personal Protection Information in Section 8, Fire and Explosion Information in Section 5, and Stability and Reactivity Information in Section 10. Provide adequate ventilation during clean-up.

Regulatory Notifications: No notification required

Containment and Clean up: No special cleanup procedures are necessary.

Other: No information available

7. HANDLING AND STORAGE INFORMATION

Handling: Contents under pressure and can explode when exposed to heat or open flame. Caution!--Do not puncture or incinerate. Do not weld on a rim without first removing the tire from the rim. Failure to do so could cause the tire to explode regardless of whether tire inflator is used. Welded and repaired rims are unsafe.

Storage: Do not store at temperatures greater than 120 F.

Empty Container Warnings
Drums: Not applicable
Plastic: Not applicable

Other: No information available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION INFORMATION

Exposure Limits and Guidelines

Component	CAS No.	Exposure Limit
HEAVY AROMATIC SOLVENT NAPHTHA	64742-94-5	OSHA - PEL: TWA 500 ppm ACGIH - TLV: TWA 100 ppm

Personal Protective Equipment

Eye/Face Protection: Wear safety glasses with unperforated sideshields.

Skin Protection: Skin protection is not required under conditions of normal use. For prolonged or repeated exposures, use impervious clothing (boots, gloves, aprons, etc.) over parts of the body subject to exposure. Launder soiled clothes.

Respiratory Protection: Respiratory protection is not required under conditions of normal use.

Personal Hygiene: Always wash hands and face with soap and water before eating, drinking, or smoking. Consumption of food and beverage should be avoided in work areas where this product is present.

Engineering Controls / Work Practices

Ventilation: All use, including deflating of tires, must be done in a well-ventilated area. If product is used in enclosed or confined spaces, adequate ventilation must be provided to prevent buildup of vapors or mists.

Other: No information available

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Foamy , milky liquid	
Odor: Ammonia - mild	**Vapor Pressure:** 77 - 79 psig @ 68 F
Physical state: Liquid	**Vapor Density (air=1):** < 1
pH: 8.5 - 9.5	**Percent Volatile by Volume:** Apx 92 %
Boiling Point: 30 F, -1.1 C	**Volatile Organic Content:** No data available
Melting Point: No data available	**Molecular Weight:** No data available
Specific Gravity: Apx 0.98	**Average Carbon Number:** No data available
Pour Point: -15 F, -26.1 C	**Viscosity @ 100 F:** 20 SUS
	Viscosity @ 40 C: No data available
Solubility in Water: Soluble in water	
Octanol / Water Coefficient: Log K_{ow} = No data available	

10. STABILITY AND REACTIVITY INFORMATION

Chemical Stability: Stable

Conditions to Avoid: High heat and open flames.

Incompatible Materials to Avoid: Avoid contact with magnesium.

Other: No information available

11. TOXICOLOGICAL INFORMATION

Primary Eye Irritation: No information available

Primary Skin Irritation: No information available

Acute Dermal Toxicity: No information available

Subacute Dermal Toxicity: No information available

Dermal Sensitization: No information available

Inhalation Toxicity: No information available

Inhalation Sensitization: No information available

Oral Toxicity: No information available

Mutagenicity: No information available

Carcinogenicity: The IARC has concluded that petroleum solvents are Group 3 substances, "not classifiable as to their carcinogenicity to humans".

Reproductive and Developmental Toxicity: No information available

Teratogenicity: No information available

Immunotoxicity: No information available

Neurotoxicity: No information available

Other: No information available

12. ECOLOGICAL INFORMATION

Aquatic Toxicity: No information available

Terrestrial Toxicity: No information available

Chemical Fate and Transport: No information available

Other: No information available

13. DISPOSAL INFORMATION

Regulatory Information: Dispose of residual products and empty containers responsibly.

Waste Disposal Methods: No special waste disposal methods are required. Waste material may be landfilled or incinerated at an approved facility.

Other: No information available

14. TRANSPORTATION INFORMATION

U.S. Department of Transportation (DOT)
Highway / Rail (Bulk): NOT APPLICABLE
Highway / Rail (Non-Bulk): CONSUMER COMMODITY, ORM-D

The DOT description is provided to assist in the proper shipping classification of this product and may not be suitable for all shipping descriptions.

International Information

Vessel:	**IMDG Regulated:**	X	**IMDG Not Regulated:**	
Air:	**ICAO Regulated:**	X	**ICAO Not Regulated:**	

Other: No information available

15. Regulatory Information

Regulatory Lists Searched: The components listed in Section 2 of this MSDS were compared to substances that appear on the following regulatory lists. Each list is numerically identified. See Regulatory Search Results below.

Health & Safety: 10 - IARC carcinogen, 11 - NTP carcinogen, 12 - OSHA carcinogen, 15 - ACGIH TLV, 16 - OSHA PEL, 17 - NIOSH exposure limit, 20 - US DOT Appendix A, Hazardous substances, 22 - FDA 21 CFR Total food additives, 23 - NFPA 49 or 325

Environmental: 30 - CAA 1990 Hazardous air pollutants, 31 - CAA Ozone depletors, 33 - CAA HON rule, 34 - CAA Toxic substance for accidental release prevention, 35 - CAA Volatile organic compounds (VOC's) in SOCMI, 41 - CERCLA / SARA Section 302 extremely hazardous substances, 42 - CERCLA / SARA Section 313 emissions reporting, 43 - CWA Hazardous substances, 44 - CWA Priority pollutants, 45 - CWA Toxic pollutants, 46 - EPA Proposed test rule for hazardous air pollutants, 47 - RCRA Basis for listing - Appendix VII, 48 - RCRA waste, 49 - SDWA - (S)MCLs

International: 50 - Canada - WHMIS Classification of substance, 54 - Mexico - Drinking water - ecological criteria, 55 - Mexico - Wastewater discharges, 56 - US -TSCA Section (12)(b) - export notification

State Lists: 60 - CA - Proposition 65, 61 - FL - Substances, 62 - MI - Critical materials, 63 - MA - RTK, 64 - MA - Extraordinarily hazardous substances, 65 - MN - Hazardous substances, 66 - PA - RTK, 67 - NJ - RTK, 68 - NJ - Environmental hazardous substances, 69 - NJ - Special hazardous substances

Inventories: 80 - Canada - Domestic substances , 81 - European - EINECS, 82 - Japan - ENCS, 83 - Korea - Existing and evaluated chemical substances, 84 - US - TSCA , 85 - China Inventory

Regulatory Search Results:
HEAVY AROMATIC SOLVENT NAPHTHA: 50, 80, 81, 83, 84, 85
TETRAFLUOROETHANE: 65, 80, 81, 82, 83, 84, 85
WATER: 80, 81, 83, 84, 85

U.S. TSCA Inventory: All components of this material are on the US TSCA Inventory.

SARA Section 313: Consumer products are not regulated under SARA, Title III, Section 313.

IARC: No information available

SARA 311 / 312 Categories
Acute: X **Chronic:** ___ **Fire:** ___ **Pressure:** X **Reactive:** ___
Not Regulated: ___

Canadian WHMIS Classification
Class A - Compressed gas
Class D - Poisonous and infectious material, Division 2B, Toxic Material

European Union Classification
Hazard Symbols:
"3" Aerosol
Harmful / Xn / X in square.
Risk Phrases:
R66: Repeated exposure may cause skin dryness or cracking.
R67: Vapours may cause drowsiness and dizziness.
Safety Phrases:
S2: Keep out of the reach of Children.
S23: Do not breathe gas/fumes/vapour/spray.
S24: Avoid contact with skin.
S62: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Other: No information available

16. OTHER INFORMATION

Health and Environmental Label Language
Front Label:
DANGER: HARMFUL OR FATAL IF SWALLOWED. CONTENTS UNDER PRESSURE.
MAY CAUSE EYE IRRITATION.
Read all cautions and directions on back panel before using.

Back Label:
DANGER:
PRECAUTIONARY MEASURES:
DO NOT inhale. Use in a well ventilated area. Avoid contact with eyes.

DO NOT puncture or incinerate container. DO NOT expose to heat, open flame, direct sunlight or store at temperatures above 120º F. Exposure to heat may cause can to rupture. DO NOT STORE IN INTERIOR OF CAR (INCLUDING GLOVE COMPARTMENT AND INSIDE HATCHBACKS). TEMPERATURES INSIDE CAR CAN EXCEED 120º F. STORE OUTSIDE PASSENGER AREA OF VEHICLE PREFERABLY SECURED IN SPARE TIRE WELL OR TRUNK.
DO NOT use with any other tire inflator products.
DO NOT use on motorcycle tires. Failure of one tire could cause loss of control. Also DO NOT use on high performance or "Z-rated" tires.
DO NOT use Fix-A-Flat with tires which utilize tire sensor technology. Fix-A-Flat may block tire sensors and cause them to be inoperable. Fix-A-Flat will not be liable for damage to tire sensors.
NEVER WELD ON A RIM. WELDING ON A RIM WITH THE TIRE MOUNTED COULD CAUSE THE TIRE TO EXPLODE REGARDLESS OF WHETHER TIRE INFLATOR IS USED. WELDED AND REPAIRED RIMS ARE UNSAFE.

FIRST AID: Contains fluorocarbons and aromatic solvents.
INHALATION: If inhaled, breathe fresh air. If breathing is affected, give artificial respiration and call a physician.
EYE CONTACT: Immediately flush with water for 15 minutes. If irritation persists, call physician.
INGESTION: If ingested, do not induce vomiting. Call physician immediately.

KEEP OUT OF REACH OF CHILDREN.

For health emergency call: 1-800-546-6040.

MSDS Revisions
Previous Version Date: 9/6/2002

Previous Version Information
Section 14 - Transportation Information Revised.

Other
No information available

Prepared By:
Pennzoil-Quaker State Company
Environmental, Safety, Health, & DOT Compliance
P.O. Box 2967
Houston, TX 77252-2967 USA

Disclaimer of Warranty: The information contained herein is based upon data and information available to us, and reflects our best professional judgement. This product may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used, Pennzoil-Quaker State Company must rely upon the hazard evaluation of such components submitted by that product's manufacturer or importer. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information. The results to be obtained from the use thereof, or that any such use does not infringe any patent. Since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

Household Products Database

National Institutes of Health
National Library of Medicine
Specialized Information Services

Home | Products | Ingredients | MSDS

Browse by Categories | Browse Alphabetically | Search

Brand Information

Brand Name: **Gumout Small Engine Carb/Choke Cleaner**
Form: aerosol
Product Category: Auto products >> Fuel System & Air Intake >> cleaner, carb/choke
Customer Service No.: 800-468-8397
Date Entered: 1996-09-03
Related Items: Products with similar usage in this database

Manufacturer

Manufacturer: Sopus Products
Div., Shell Oil Company
includes Pennzoil-Quaker State
Address: PO Box 4427
City: Houston
State: TX
Zip Code: 77210
Telephone Number: 800-416-1600
Toll Free Number: 800-416-1600
Date Info Verified: 2007-02-07
Related Items: Products by this manufacturer

Health Effects

Search TOXNET
Enter text or highlight term...

The following information (Health Effects, Handling/Disposal, and Ingredients) is taken from the product label and/or the Material Safety Data Sheet (MSDS) prepared by the manufacturer. The National Library of Medicine does not evaluate information from the product label or the Material Safety Data Sheet.

Warning from Product Label: Danger: do not puncture, incinerate or store above 120 deg F. Avoid prolonged exposure to sunlight. Prolonged and repeated skin contact may cause skin disorders. Precautionary measures and first aid same as Tune up spray for fuel injector engines. (Gumout) Warning: This product contains a chemical known in the state of CA to cause cancer.

Acute Health Effects: From MSDS
INHALATION: Avoid prolonged inhalation of vapors. Exposure to vapors may be irritating to the throat and lungs. When high concentrations are inhaled, human signs may include a reddening of the face and a feeling of increased body heat. In addition, disturbed vision, dizziness, tremors, salivation, cardiac stress, drowsiness, dullness, numbness, weakness, headache, nausea, and confusion, as well as respiratory difficulties may be apparent. Extremely high concentrations have anesthetic effects and may

lead to death.
EYE CONTACT: Avoid eye contact. This product can cause corneal burns, twitching and redness. These effects are transient, and complete recovery follows.
SKIN CONTACT: Avoid skin contact. This product may cause skin irritation upon direct contact. Prolonged or repeated contact may result in contact dermatitis which is characterized by dryness, chapping, and reddening. This condition may make the skin more susceptible to other irritants, sensitizers, and disease. Pre-existing skin conditions may make the skin more susceptible and facilitate uptake by this route. May be absorbed through skin.
INGESTION: There are no known adverse effects based on current references. Ingestion of small quantities is usually nonfatal unless aspiration occurs. Aspiration may lead to chemical pneumonitis which is characterized by pulmonary edema and hemorrhage and may be fatal. Signs of lung involvement include increased respiratory rate, increased heart rate, and a bluish discoloration of the skin. Coughing, choking, and gagging are often noted at the time of aspiration. Gastrointestinal discomfort may develop, followed by vomiting with a further risk of aspiration. Ingestion will cause severe gastrointestinal distress. Severe oral intoxication will lead to intense burning of the throat and may result in drowsiness, dullness, numbness, and headache followed by dizziness, weakness, and nausea. Loss of consciousness and convulsions followed by death.

Chronic Health Effects: MSDS: Signs and symptoms from chronic exposure resemble those from acute mishaps but are in part systemically more severe. Symptoms related to the nervous system, kidneys, and liver have been reported following long-term inhalation exposure to high concentrations.

Laboratory animals repeatedly exposed to high doses of xylene have exhibited symptoms related to liver, kidney, lungs, spleen, heart, blood and adrenals.

Carcinogenicity: From MSDS: IARC has concluded that xylene and isopropyl alcohol solvents are Group 3 substances, "not classifiable as to their carcinogenicity to humans." This product is not carcinogenic according to OSHA.

Health Rating: 2

Flammability Rating: 3

Reactivity Rating: 0

HMIS Rating Scale: 0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe;
N = No information provided by manufacturer; * = Chronic Health Hazard

MSDS Date: 2002-09-06

Handling/Disposal

Handling: MSDS: All ignition sources in the area should be controlled. Fire extinguishers should be kept readily available. Do not store at temperatures greater than 120oF. Contents under pressure and can explode when exposed to heat or open flame. CAUTION: Do not puncture or incinerate.

Disposal: MSDS: The material, if spilled or discarded, may be a regulated waste. Refer to state and local regulations. Waste material may be landfilled or incinerated at an approved facility.

Ingredients from MSDS/Label

Chemical	CAS No / Unique ID	Percent
Surfactant(s) (unspecified)	000000-00-4	<1
Isopropanol	000067-63-0	1-7
Propane	000074-98-6	15-25

Methyl ethyl ketone	000078-93-3	1-7
Distillates, petroleum, hydrotreated light	064742-47-8	10-30
Solvent naphtha, petroleum, light aromatic	064742-95-6	30-50

Note: Brand names are trademarks of their respective holders.
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Customer Service: tehip@teh.nlm.nih.gov
Last updated: April 23, 2007

MATERIAL SAFETY DATA SHEET

QUAKER STATE HD SAE MOTOR OIL - ALL GRADES

1. PRODUCT AND COMPANY IDENTIFICATION

MSDS Number: 14943
Version Date: 6/26/2002

Product Name: QUAKER STATE HD SAE MOTOR OIL - ALL GRADES
Product Use: Engine oil
Synonyms: 10W, 20W-20, 30W, 40W

Manufacturer
Pennzoil-Quaker State Company
P.O.Box 2967
Houston, TX 77252
USA

Phone Numbers
Medical Emergency: 1-800-546-6040
Transportation Emergency (USA): 1-800-535-5053
Transportation Emergency (International):
1-352-323-3500 (Call Collect)
MSDS Assistance: 1-800-546-6227
Fax On Demand: 1-800-546-6227
Technical Assistance: 1-800-458-4998
Customer Service: 1-800-468-8397
Fax Number: 713-217-3181
Internet Address: www.MSDS.PZLQS.com

2. COMPONENT INFORMATION

Component	CAS No.	Weight Percent Range	Hazardous in Blend
HYDROTREATED HEAVY PARAFFINIC PETROLEUM DISTILLATES	64742-54-7	< 95	No
SOLVENT-DEWAXED HEAVY PARAFFINIC DISTILLATE	64742-65-0	< 95	No
DETERGENT/INHIBITOR SYSTEM	MIXTURE	< 20	No
POUR POINT DEPRESSANT	MIXTURE	< 1	No

This product is **NOT HAZARDOUS** according to OSHA 29 CFR 1910.1200.

Other: No information available

3. HAZARDS IDENTIFICATION

Emergency and Hazards Overview
CAUTION: Contains Petroleum Lubricant. Repeated skin contact can cause skin disorders.

ATTENTION: Used motor oil is a possible skin cancer hazard based on animal data. Repeated exposure to oil mist in excess of the OSHA limit (5mg/m3) can result in accumulation of oil droplets in pulmonary tissue.

NFPA Ratings: **Health** 1 **Flammability** 1 **Reactivity** 0

Primary Route of Exposure: **Skin** X **Inhalation** ____ **Eye** ____

Health Effect Information

Eye Contact: This product is practically non-irritating to the eyes upon direct contact. Based on testing of similar products and/or components.

Skin Contact: Avoid skin contact. This product is minimally irritating to the skin upon direct contact. Based on testing of similar products and/or components. Prolonged or repeated contact may result in contact dermatitis which is characterized by dryness, chapping, and reddening. Prolonged or repeated contact may result in oil acne which is characterized by blackheads with possible secondary infection. Avoid prolonged and repeated skin contact with used motor oils. See Section 11 - Toxicological Information.

Inhalation: This product has a low vapor pressure and is not expected to present an inhalation hazard at ambient conditions. Caution should be taken to prevent aerosolization or misting of this product. On rare occasions, prolonged and repeated exposure to oil mist poses a risk of pulmonary disease such as chronic lung inflammation. Signs of respiratory effects vary with concentration and length of exposure and include nasal discharge, sore throat, coughing, bronchitis, pulmonary edema and difficulty breathing. Shortness of breath and cough are the most common symptoms.

Ingestion: Do not ingest. This product is relatively non-toxic by ingestion. This product has laxative properties and may result in abdominal cramps and diarrhea. Exposure to a large single dose, or repeated smaller doses, may lead to lung aspiration, which can lead to lipid pneumonia or chronic lung inflammation. These are low-grade, chronic localized tissue reactions.

Medical Conditions Aggravated by Exposure: Drying and chapping may make the skin more susceptible to other irritants, sensitizers and disease.

Other: No information available

4. FIRST AID INFORMATION

Eye Contact: Immediately flush eyes with large amounts of water and continue flushing until irritation subsides. If material is hot, treat for thermal burns and seek immediate medical attention.

Skin Contact: No treatment is necessary under ordinary circumstances. Remove contaminated clothing. Wash contaminated area thoroughly with soap and water. If redness or irritation occurs and persists, seek medical attention. If material is hot, submerge injured area in cold water. If victim is severely burned, remove to a hospital immediately.

Inhalation: This material has a low vapor pressure and is not expected to present an inhalation exposure at ambient conditions.

Ingestion: No treatment is necessary under ordinary circumstances. Do not induce vomiting. If victim exhibits signs of lung aspiration such as coughing or choking, seek immediate medical assistance.

Notes to Physician: No information available

Other: No information available

5. FIRE AND EXPLOSION INFORMATION

Flammable Properties

Flash Point: >400 F, >204.4 C **Test Method:** ASTM D-92 (C.O.C.)

Flammable Limits in Air

Upper Percent: No data available

Lower Percent: No data available

Autoignition Temperature: No data available **Test Method:** No information available

NFPA Classification: Class III-B combustible liquid

Extinguishing Media: Use dry chemical, foam, or carbon dioxide.

Fire Fighting Measures

Special Fire Fighting Procedures and Equipment: Water may be ineffective but can be used to cool containers exposed to heat or flame to prevent vapor pressure buildup and possible container rupture. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Unusual Fire and Explosion Conditions: Dense smoke may be generated while burning. Carbon monoxide, carbon dioxide, and other oxides may be generated as products of combustion.

Hazardous Combustion By-Products: None

Other: No information available

6. ACCIDENTAL RELEASE MEASURES

Personnel Safeguards: Consult Health Effect Information in Section 3, Personal Protection Information in Section 8, Fire and Explosion Information in Section 5, and Stability and Reactivity Information in Section 10.

Regulatory Notifications: Notify appropriate authorities of spill.

Containment and Clean up: Contain spill immediately. Do not allow spill to enter sewers or watercourses. Absorb with appropriate inert material such as sand, clay, etc. Large spills may be picked up using vacuum pumps, shovels, buckets, or other means and placed in drums or other suitable containers.

Other: No information available

7. HANDLING AND STORAGE INFORMATION

Handling: Fire extinguishers should be kept readily available. See NFPA 30 and OSHA 1910.106--Flammable and Combustible Liquids.

Storage: Do not transfer to unmarked containers. Store in closed containers away from heat, sparks, open flame, or oxidizing materials.

Empty Container Warnings

Drums: Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed. Empty containers retain product residue and can be dangerous.

Plastic: Empty container may retain product residues.

Other: No information available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION INFORMATION

Exposure Limits and Guidelines

This product does not contain any components with OSHA or ACGIH exposure limits.

Personal Protective Equipment

Eye/Face Protection: Eye protection is not required under conditions of normal use. If material is handled such that it could be splashed into eyes, wear plastic face shield or splash-proof safety goggles.

Skin Protection: No skin protection is required for single, short duration exposures. For prolonged or repeated exposures, use impervious clothing (boots, gloves, aprons, etc.) over parts of the body subject to exposure. If handling hot material, use insulated protective clothing (boots, gloves, aprons, etc.). Launder soiled clothes. Properly dispose of contaminated leather articles including shoes, which cannot be decontaminated.

Respiratory Protection: Respiratory protection is not required under conditions of normal use. If vapor or mist is generated when the material is heated or handled, use an organic vapor respirator with a dust and mist filter. All respirators must be NIOSH certified. Do not use compressed oxygen in hydrocarbon atmospheres.

Personal Hygiene: Consumption of food and beverage should be avoided in work areas where hydrocarbons are present. Always wash hands and face with soap and water before eating, drinking, or smoking.

Engineering Controls / Work Practices

Ventilation: If vapor or mist is generated when the material is heated or handled, adequate ventilation in accordance with good engineering practice must be provided to maintain concentrations below the specified exposure or flammable limits.

Other: The OSHA permissible exposure limit (PEL) and ACGIH threshold limit value (TLV) for oil mist is 5 mg/m3. Chronic exposures below 5 mg/m3 are without significant health risks. The ACGIH short-term exposure limit (STEL) for oil mist is 10 mg/m3.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Light amber to amber	
Odor: Hydrocarbon - mild	**Vapor Pressure:** No data available
Physical state: Liquid	**Vapor Density (air=1):** No data available
pH: No data available	**Percent Volatile by Volume:** No data available
Boiling Point: No data available	**Volatile Organic Content:** No data available
Melting Point: No data available	**Molecular Weight:** No data available
Specific Gravity: 0.86 - 0.9	**Average Carbon Number:** No data available
Pour Point: No data available	**Viscosity @ 100 F:** No data available
	Viscosity @ 40 C: Apx 60.4 cSt
Solubility in Water: Negligible in water	
Octanol / Water Coefficient: Log K_{ow} = No data available	

10. STABILITY AND REACTIVITY INFORMATION

Chemical Stability: Stable

Conditions to Avoid: High heat and open flames.

Incompatible Materials to Avoid: May react with strong oxidizing agents.

Other: No information available

11. TOXICOLOGICAL INFORMATION

Primary Eye Irritation: No information available

Primary Skin Irritation: No information available

Acute Dermal Toxicity: No information available

Subacute Dermal Toxicity: No information available

Dermal Sensitization: No information available

Inhalation Toxicity: No information available

Inhalation Sensitization: No information available

Oral Toxicity: No information available

Mutagenicity: No information available

Carcinogenicity: The International Agency for Research on Cancer (IARC) has concluded that there is inadequate data to evaluate the carcinogenicity to experimental animals of this class of product. IARC has concluded there is sufficient evidence that used gasoline-engine motor oils produce skin tumors in experimental animals. Also, IARC has determined this class of products belongs to Group 3-"not classifiable as to its carcinogenicity to humans".

Reproductive and Developmental Toxicity: No information available

Teratogenicity: No information available

Immunotoxicity: No information available

Neurotoxicity: No information available

Other: No information available

12. ECOLOGICAL INFORMATION

Aquatic Toxicity: No information available

Terrestrial Toxicity: No information available

Chemical Fate and Transport: No information available

Other: No information available

13. DISPOSAL INFORMATION

Regulatory Information: All disposals must comply with federal, state, and local regulations. The material, if spilled or discarded, may be a regulated waste. Refer to state and local regulations. Caution! If regulated solvents are used to clean up spilled material, the resulting waste mixture may be regulated. Department of Transportation (DOT) regulations may apply for transporting this material when spilled.

Waste Disposal Methods: Waste material may be landfilled or incinerated at an approved facility. Materials should be recycled if possible.

Other: No information available

14. TRANSPORTATION INFORMATION

U.S. Department of Transportation (DOT)
Highway / Rail (Bulk): Not Regulated
Highway / Rail (Non-Bulk): Not Regulated

The DOT description is provided to assist in the proper shipping classification of this product and may not be suitable for all shipping descriptions.

International Information

Vessel:	**IMDG Regulated:**	____	**IMDG Not Regulated:**	X
Air:	**ICAO Regulated:**	____	**ICAO Not Regulated:**	X

Other: No information available

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15. Regulatory Information

Regulatory Lists Searched: The components listed in Section 2 of this MSDS were compared to substances that appear on the following regulatory lists. Each list is numerically identified. See Regulatory Search Results below.

Health & Safety: 10 - IARC carcinogen, 11 - NTP carcinogen, 12 - OSHA carcinogen, 15 - ACGIH TLV, 16 - OSHA PEL, 17 - NIOSH exposure limit, 20 - US DOT Appendix A, Hazardous substances, 22 - FDA 21 CFR Total food additives, 23 - NFPA 49 or 325

Environmental: 30 - CAA 1990 Hazardous air pollutants, 31 - CAA Ozone depletors, 33 - CAA HON rule, 34 - CAA Toxic substance for accidental release prevention, 35 - CAA Volatile organic compounds (VOC's) in SOCMI, 41 - CERCLA / SARA Section 302 extremely hazardous substances, 42 - CERCLA / SARA Section 313 emissions reporting, 43 - CWA Hazardous substances, 44 - CWA Priority pollutants, 45 - CWA Toxic pollutants, 46 - EPA Proposed test rule for hazardous air pollutants, 47 - RCRA Basis for listing - Appendix VII, 48 - RCRA waste, 49 - SDWA - (S)MCLs

International: 50 - Canada - WHMIS Classification of substance, 54 - Mexico - Drinking water - ecological criteria, 55 - Mexico - Wastewater discharges, 56 - US -TSCA Section (12)(b) - export notification

State Lists: 60 - CA - Proposition 65, 61 - FL - Substances, 62 - MI - Critical materials, 63 - MA - RTK, 64 - MA - Extraordinarily hazardous substances, 65 - MN - Hazardous substances, 66 - PA - RTK, 67 - NJ - RTK, 68 - NJ - Environmental hazardous substances, 69 - NJ - Special hazardous substances

Inventories: 80 - Canada - Domestic substances , 81 - European - EINECS, 82 - Japan - ENCS, 83 - Korea - Existing and evaluated chemical substances, 84 - US - TSCA , 85 - China Inventory

Regulatory Search Results:
HYDROTREATED HEAVY PARAFFINIC PETROLEUM DISTILLATES: 80, 81, 83, 84, 85
SOLVENT-DEWAXED HEAVY PARAFFINIC DISTILLATE: 80, 81, 83, 84, 85

U.S. TSCA Inventory: All components of this material are on the US TSCA Inventory.

SARA Section 313: This product is not known to contain any SARA, Title III, Section 313 Reportable Chemicals at or greater than 1.0% (0.1% for carcinogens).

IARC: No information available

SARA 311 / 312 Categories
Acute: ___ **Chronic:** ___ **Fire:** ___ **Pressure:** ___ **Reactive:** ___
Not Regulated: X

Canadian WHMIS Classification
Not a controlled substance under WHMIS

European Union Classification
Hazard Symbols:
No classification recommended

Risk Phrases:
No classification recommended
Safety Phrases:
No classification recommended

Other: No information available

16. OTHER INFORMATION

Health and Environmental Label Language

CAUTION: Contains Petroleum Lubricant. Repeated skin contact can cause skin disorders.

ATTENTION: Used motor oil is a possible skin cancer hazard based on animal data. Repeated exposure to oil mist in excess of the OSHA limit (5mg/m3) can result in accumulation of oil droplets in pulmonary tissue.

PRECAUTIONARY MEASURES: Avoid excessive & prolonged skin contact. Wash thoroughly after handling. Avoid generation and inhalation of oil mists.

INSTRUCTIONS IN CASE OF FIRE OR SPILL: In case of fire, use water spray, foam, dry chemical or carbon dioxide. Water spray may be ineffective, but can be used to cool containers. In case of spill, do not use water, soak up with absorbent material.

MSDS Revisions
Previous Version Date: 5/25/2001

Previous Version Information
Section 2 - Component Information - Revised.

Other
No information available

Prepared By:
Pennzoil-Quaker State Company
Environmental, Safety, Health, & DOT Compliance
P. O. Box 2967
Houston, TX 77252-2967 USA

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 580.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Pepsin

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

Hazard class: Specific target organ toxicity, single exposure; respiratory tract irritation (Category 3). May cause respiratory irritation (H335). Avoid breathing dust or fumes (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Pepsin (source: porcine) (activity 1:3000)	9001-75-6	Unspecified	Unspecified	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water (P302+P352). **If skin irritation occurs:** Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
Fine powder when mixed with air may be explosive. When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Wipe up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, amines and amides.
Store in a cool dry place. Keep container tightly closed (P233). Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White or yellowish-white. Odor of sour malt.
Soluble: Water. Insoluble in alcohol.

Biological enzyme. Active only in acidic solution.

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with alcohol, alkalies, tannins and salts of heavy metals.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Eye, skin, and respiratory tract irritation
Chronic effects: Possible hypersensitization, dermatitis
Target organs: Respiratory tract.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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SAFETY DATA SHEET

Issuing Date No data available **Revision Date** 02-Jul-2014 **Revision Number** 1

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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name **Perfect Stainless**

Other means of identification

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Metal polish

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Name The Hope Company
Supplier Address 12777 Pennridge
Bridgeton
MO
63044
US
Supplier Phone Number Phone:314-739-7254
Fax:314-739-7786
Contact Phone314-739-7254
Supplier Email andrew@hopecompany.com
Emergency telephone number

2. HAZARDS IDENTIFICATION

Classification

This product is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

GHS Label elements, including precautionary statements

Emergency Overview

Signal word	**None**

Hazard Statements
None

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance	White	**Physical State**	Emulsion Liquid	**Odor**	Lemon

Precautionary Statements - Prevention
Obtain special instructions before use

Precautionary Statements - Response
None

Precautionary Statements - Storage
None

Precautionary Statements - Disposal
None

Hazards not otherwise classified (HNOC)

Not applicable

Unknown Toxicity
12.35% of the mixture consists of ingredient(s) of unknown toxicity

Other information

No information available

Interactions with Other Chemicals
No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

The product contains no substances which at their given concentration, are considered to be hazardous to health.

4. FIRST AID MEASURES

First aid measures

Eye Contact	Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.
Skin Contact	Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.
Inhalation	Remove to fresh air. If symptoms persist, call a physician.

Ingestion Do NOT induce vomiting. Rinse mouth. If symptoms persist, call a physician.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects Difficulty in breathing. Coughing and/ or wheezing. Dizziness.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical
No information available.

Hazardous Combustion Products
Carbon oxides.

Explosion Data
Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge No.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions	Avoid contact with eyes. Ensure adequate ventilation. Use personal protective equipment as required.
Other Information	Refer to protective measures listed in Sections 7 and 8.

Environmental Precautions

Environmental Precautions	Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with eyes.

Conditions for safe storage, including any incompatibilities

Storage	Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.
Incompatible Products	None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits NIOSH IDLH Immediately Dangerous to Life or Health

Appropriate engineering controls

Engineering Measures	Showers Eyewash stations Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection	No special protective equipment required.
Skin and Body Protection	No special protective equipment required.
Respiratory Protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical State	Emulsion Liquid		
Appearance	White	**Odor**	Lemon
Color	No information available	**Odor Threshold**	No information available

Property	Values	Remarks/ Method
pH	7	None known
Melting / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash Point	No data available	None known
Evaporation Rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		
Upper flammability limit	No data available	
Lower flammability limit	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Specific Gravity	No data available	None known
Water Solubility	Soluble in water	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive properties	No data available	
Oxidizing Properties	No data available	

Other Information

Softening Point	No data available
VOC Content (%)	No data available
Particle Size	No data available
Particle Size Distribution	

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization
Hazardous polymerization does not occur.

Conditions to avoid
None known based on information supplied.

Incompatible materials
None known based on information supplied.

Hazardous Decomposition Products
Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information	Product does not present an acute toxicity hazard based on known or supplied information. .
Inhalation	Specific test data for the substance or mixture is not available.
Eye Contact	Specific test data for the substance or mixture is not available. May cause irritation.
Skin Contact	Repeated exposure may cause skin dryness or cracking.
Ingestion	Specific test data for the substance or mixture is not available. Potential for aspiration if swallowed. May cause lung damage if swallowed. Aspiration may cause pulmonary edema and pneumonitis. May be fatal if swallowed and enters airways.

Component Information

Information on toxicological effects

Symptoms	Difficulty in breathing. Coughing and/ or wheezing. Asthma-like and/ or skin allergy-like symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	No information available.
Mutagenic Effects	No information available.
Carcinogenicity	Carcinogenic potential is unknown.
Reproductive Toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Chronic Toxicity	No known effect based on information supplied. Aspiration may cause pulmonary edema and pneumonitis. Carcinogenic potential is unknown.
Target Organ Effects	Respiratory system.
Aspiration Hazard	No information available.

Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)
83,268.00 mg/kg
ATEmix (dermal)
61,355.00 mg/kg (ATE)

12. ECOLOGICAL INFORMATION

Ecotoxicity
The environmental impact of this product has not been fully investigated.

Persistence and Degradability
No information available.

Bioaccumulation
No information available

Other adverse effects
No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging Dispose of contents/containers in accordance with local regulations.

California Hazardous Waste Codes 561

14. TRANSPORT INFORMATION

DOT NOT REGULATED NOT REGULATED
Proper Shipping Name NON REGULATED
Hazard Class N/A

TDG Not regulated

MEX Not regulated

ICAO Not regulated

IATA Not regulated
Proper Shipping Name NON REGULATED
Hazard Class N/A

IMDG/IMO Not regulated
Hazard Class N/A

RID Not regulated

ADR Not regulated

ADN Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

.

International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. OTHER INFORMATION

NFPA	**Health Hazards**	1	**Flammability**	0	**Instability**	0	**Physical and Chemical Hazards**	-
HMIS	**Health Hazards**	1	**Flammability**	0	**Physical Hazard**	0	**Personal Protection**	X

Prepared By Hope Company
12777 Pennridge
Bridgeton, MO 63044
Revision Date 02-Jul-2014
Revision Note No information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet

Material Safety Data Sheet:PERMASTICK, M/M

Supercedes Date 06/13/2006 **Issuing Date** 04/28/2009

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name PERMASTICK, M/M
Recommended Use Adhesive
Information on Manufacturer
CHEMSEARCH FE DIV. OF NCH CORP.
BOX 152170
IRVING, TX 75015

Product Code 4738
Chemical Nature Cyanoacrylate
Emergency Telephone Number
CHEMTREC ® 800-424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview
Warning
Combustible material
Bonds skin instantly
Causes eye irritation
May cause allergic skin reaction
May cause allergic respiratory reaction
Causes respiratory tract irritation

Color Colorless **Physical State** Paste **Odor** Strong

Potential Health Effects

Principle Route of Exposure	Skin contact, Eye contact, Inhalation.
Primary Routes of Entry	Skin Absorption, Inhalation.
Acute Effects	
Eyes	Causes eye irritation
Skin	Causes skin irritation. Bonds skin instantly. May cause allergic skin reaction
Inhalation	Causes respiratory tract irritation. May cause allergic respiratory reaction
Ingestion	Not an expected route of exposure
Chronic Effects	May cause sensitization by skin contact, May cause sensitization by inhalation.
Target Organ Effects	Respiratory system, Eyes, Skin, Bone Marrow.
Aggravated Medical Conditions	Skin disorders, Respiratory disorders.
Potential Environmental Effects	See Section 12 for additional Ecological information

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No
Ethyl cyanoacrylate	7085-85-0
Poly (methyl methacrylate)	9011-14-7
Hydroquinone	123-31-9

4. FIRST AID MEASURES

General Advice	Do not get in eyes, on skin, or on clothing. Avoid breathing vapors, mist, or gas
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Eyelid bonding: see a doctor. Do not force apart. Get medical attention immediately
Skin Contact	Wash off with warm water and soap. Get medical attention if irritation develops and persists. Wash contaminated clothing before re-use
Inhalation	If inhaled, remove to fresh air. Get medical attention if symptoms occur
Ingestion	Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention if symptoms occur
Notes to Physician	Cyanoacrylate. Danger. Bonds skin and eyes in seconds. Keep out of the reach of children. Treat symptomatically

5. FIRE-FIGHTING MEASURES

Flash Point 185°F/85°C **Method** Tag closed cup
Autoignition Temperature No information available
Flammability Limits in Air % No information available
Suitable Extinguishing Media
Water spray. Carbon dioxide (CO_2). Foam. Dry chemical
Specific Hazards Arising from the Chemical
Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes .
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

NFPA	**Health**	1	**Flammability**	2	**Instability**	1
HMIS	**Health**	1	**Flammability**	2	**Instability**	1

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions
Environmental Precautions Do not flush into surface water or sanitary sewer system
Methods for Containment No information available
Methods for Cleaning Up Pick up and transfer to properly labeled containers
Neutralizing Agent Not applicable

7. HANDLING AND STORAGE

Handling Do not get in eyes, on skin, or on clothing. Avoid breathing vapors or mists
Storage Store in original container. Keep container tightly closed in a dry and well-ventilated place
Storage Temperature **Minimum** 40°F/4°C **Maximum** 77°F/25°C
Storage Conditions **Indoor** X **Outdoor** **Heated** **Refrigerated**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Ethyl cyanoacrylate	TWA: 0.2 ppm	No data available	No data available
Poly (methyl methacrylate)	No data available	No data available	No data available
Hydroquinone	TWA: 1 mg/m^3	TWA: 2 mg/m^3	IDLH: 50 mg/m^3 Ceiling: 2 mg/m^3

Engineering Measures Ensure adequate ventilation
Personal Protective Equipment
Eye/Face Protection Safety glasses with side-shields
Skin Protection Wear suitable protective clothing, Impervious gloves.
Respiratory Protection In case of inadequate ventilation wear respiratory protection
General Hygiene Considerations Ensure that eyewash stations and safety showers are close to the workstation location. Wash contaminated clothing before re-use

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State Paste
Color Colorless
Appearance Transparent
Specific Gravity 1.05
Percent Volatile (Volume) 100
VOC Content (g/l) 1050
Vapor Density <1 (Air = 1.0)
Boiling Point/Range 365°F/185°C
Viscosity Viscous
Odor Strong
pH Not applicable
Evaporation Rate <1 (Butyl acetate=1)
VOC Content (%) 100
Vapor Pressure 1 mmHg @ 70 °F
Solubility Negligible

10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal conditions
Conditions to Avoid Heat, flames, and sparks
Incompatible Products Strong oxidizing agents, Water, Alcohols, Amines, Bases.
Hazardous Decomposition Products Carbon oxides, Nitrogen oxides (NOx).
Possibility of Hazardous Reactions None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information No information available

Component Information
Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Ethyl cyanoacrylate	5 mL/kg (Rat)	no data available	no data available	no data available	no data available
Poly (methyl methacrylate)	no data available	no data available	no data available	no data available	no data available
Hydroquinone	320 mg/kg (Rat)	900 mg/kg (Rat)	no data available	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Ethyl cyanoacrylate	no data available	no data available	no data available	no data available	Bone marrow
Poly (methyl methacrylate)	no data available	no data available	no data available	no data available	no data available
Hydroquinone	no data available	no data available	no data available	no data available	eyes, skin, CNS, respiratory system

Carcinogenicity

Component	ACGIH	IARC	NTP	OSHA	Other
Ethyl cyanoacrylate	not applicable	not applicable	not applicable	not applicable	not applicable
Poly (methyl methacrylate)	not applicable	not applicable	not applicable	not applicable	not applicable
Hydroquinone	A3	not applicable	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information No information available

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Ethyl cyanoacrylate	no data available	no data available	no data available	no data available	N/A
Poly (methyl methacrylate)	no data available	no data available	no data available	no data available	N/A
Hydroquinone	120 Hr EC50 Scenedesmus subspicatus: 13.5 mg/L	96 Hr LC50 Oncorhynchus mykiss: 0.044 mg/L [flow-through]; 96 Hr LC50 Pimephales promelas:0.044 mg/L [flow-through]; 96 Hr LC50 Pimephales promelas:0.1-0.18 mg/L [static]; 96 Hr LC50 Brachydanio rerio:0.17 mg/L	EC50 = 0.038 mg/L 15 min EC50 = 0.0382 mg/L 30 min EC50 = 0.042 mg/L 5 min EC50 = 23.75 mg/L 60 min	48 Hr EC50 water flea: 0.05 mg/L	0.5

Persistence and Degradability No information available
Bioaccumulation No information available
Mobility No information available

13. DISPOSAL CONSIDERATIONS

Product Disposal Dispose of in accordance with local regulations
Container Disposal Empty containers should be taken for local recycling, recovery or waste disposal

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

ICAO Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

Inventories
TSCA Complies
DSL Complies

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40n of the Code of Federal Regulations, Part 372

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Hydroquinone	123-31-9	0.1-1	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	Yes	No	No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Ethyl cyanoacrylate	Not applicable	Not applicable
Poly (methyl methacrylate)	Not applicable	Not applicable
Hydroquinone	100 lb	= 10000 lb upper threshold TPQ = 500 lb lower threshold TPQ 100 lb

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all

the information required by the CPR

WHMIS Hazard Class
B3 Combustible liquid, D2B Toxic materials.

16. OTHER INFORMATION

Prepared By	Kristen Stansbury
Supercedes Date	06/13/2006
Issuing Date	04/28/2009
Reason for Revision	No information available
Glossary	No information available
List of References.	No information available

CHEMSEARCH FE DIV. OF NCH CORP.assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage or disposal of the product. The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text

Permatex, Inc.
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Hartford, CT 06106 USA
Telephone: 1-87-Permatex
(877) 376-2839
Emergency: 800-255-3924
International Emergency: 813-248-0585

Material Safety Data Sheet

1. PRODUCT IDENTIFICATION

Product Name: **133K ANTI-SEIZE LUBRICANT 8OZ**
Item No: **80078**
Product Type: **Lubricant**

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	Weight Percent	ACGIH TLV:	OSHA PEL:
MINERAL OIL 64741-44-2	35-40	5 mg/m^3 TWA	10 mg/m^3 TWA
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC 64742-52-5	20-30	5 mg/m^3 mist	5 mg/m^3 mist
CALCIUM OXIDE 1305-78-8	15-25	2 mg/m^3 TWA	5 mg/m^3 TWA
ALUMINIUM POWDER 7429-90-5	5-15	10 mg/m^3 TWA (metal dust) ACGIH	15 mg/m^3 TWA (total dust), 5 mg/m^3 TWA (respirable)
GRAPHITE 7782-42-5	1-10	2 mg/m^3 respir.dust	15 mppcf TWA

3. HAZARDS IDENTIFICATION

Toxicity: May cause eye and skin irritation. May cause nose, throat and respiratory irritation. May cause gastrointestinal irritation. High concentrations may cause central nervous system (CNS) depression.

Primary Routes of Entry: Eye and skin contact, ingestion, inhalation

Signs and Symptoms of Exposure: Overexposure may cause eye and skin redness, difficulty breathing and vomiting. Excessive accidental exposure may cause headache, dizziness, nausea and mild respiratory irritation. Inhalation of dust at levels above recommended exposure limit may cause metallic or sweet taste, irritation of pharynx and possible ulceration with performation of the nasal septum. Repeated skin contact may cause allergic skin reactions.

Medical Conditions Recognized as Being Aggravated by Exposure: Persons with respiratory problems such as emphysema and asthma should avoid inhalation.

4. FIRST AID MEASURES

Ingestion: If swallowed, DO NOT induce vomiting. Keep individual calm. Obtain medical attention.

Inhalation: Move to fresh air in case of accidental inhalation of vapours. Oxygen or artificial respiration if needed. Obtain medical attention.

Skin Contact: Wash off with soap and water. If skin irritation persists, call a physician.

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

5. FIRE FIGHTING MEASURES

Flash Point (°F/C): Greater than 200 degrees F. Method: Tag Closed Cup

Recommended Extinguishing Media: Carbon Dioxide, Dry Chemicals, Foam.

Special Fire-Fighting Procedures: Firefighters should wear self-contained breathing apparatus. Water spray may be ineffective on flames but should be used to keep fire-exposed containers cool.

Hazardous Products of Combustion: Metal oxide fumes, Oxides of carbon, Incomplete combustion may emit component hydrocarbons.

Unusual Fire/Explosion Hazards: May ignite when sufficient heat is applied.

Lower Explosive Limit: 30% aluminum metal; 1% oil

Upper Explosive Limit: 7% oil

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures: Eliminate all sources of ignition. Maintain good ventilation. Take up with an inert absorbent. Store in a closed waste container until disposal.

7. HANDLING AND STORAGE

Storage: Store away from heat, sparks or open flame. Do not store at temperatures above 120 degrees F.

Handling: Avoid prolonged skin contact. Keep away from eyes. Do not inhale vapors. Do not use near heat, sparks or open flame. Wash hands and face after handling this compound.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Safety glasses

Skin: Rubber or plastic gloves.

Ventilation: General; local exhaust ventilation as necessary to control any air contaminants to within their exposure limits (or to the lowest feasible levels when limits have not been established) during the use of this product.

Respiratory Protection: Not required under normal use. An approved respirator (i.e. NIOSH, etc.) should be worn when exposures are expected to exceed the applicable limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Silver paste
Odor: petroleum distillates
Boiling Point: Not determined
pH: Does not apply
Solubility in Water: Nil
Specific Gravity: 1.17
VOC Content(Wt.%): None
Vapor Pressure: Less than 5 mm Hg
Vapor Density (Air=1): Not Determined
Evaporation Rate: Not Determined

10. STABILITY AND REACTIVITY

Chemical Stability: Stable at normal conditions
Hazardous Polymerization: Will not occur
Incompatabilities: Strong oxidizers, alkalies, mineral acids, selected amines.
Conditions to Avoid: Heat.
Hazardous Products of Combustion: Metal oxide fumes, Oxides of carbon, Incomplete combustion may emit component hydrocarbons.

11. TOXICOLOGICAL INFORMATION

See Section 3

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended Method of Disposal: Disposal should be made in accordance with federal, state and local regulations.
US EPA Waste Number: D001 as per 40CFR 261.21

14. TRANSPORTATION INFORMATION

DOT (49CFR 172)

Domestic Ground Transport

DOT Shipping Name: Unrestricted
Hazard Class: None
UN/ID Number: None
Marine Pollutant: None

IATA

Proper Shipping Name: Not regulated
Class or Division: None
UN/NA Number: None

IMDG

Proper Shipping:	Unrestricted
Hazard Class:	None
UN Number:	None

15. REGULATORY INFORMATION

SARA 313 Chemicals: The following component(s) is listed as a SARA Section 313 Toxic Chemical.

NONE

CALIFORNIA PROP 65:
No California Prop 65 chemicals are known to be present.

TSCA Inventory Status:
Listed on Inventory: YES All components of this product are listed (or exempt) on the EPA TSCA inventory.

16. OTHER INFORMATION

Estimated NFPA Rating:	HEALTH 1, FLAMMABILITY 1, INSTABILITY 1
Estimated HMIS Classification:	HEALTH 1, FLAMMABILITY 1, PHYSICAL HAZARD 0

NFPA is a registered trademark of the National Fire Protection Assn.
HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared By: Denise Boyd, Health and Safety Manager
Company: Permatex. Inc. 10 Columbus Blvd. Hartford, CT USA 06106
Telephone No.: 1-87-Permatex (877) 376-2839

Revision Date: 07/18/2006
Revision Number: 6

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Telephone: 1-87-Permatex
(877) 376-2839
Emergency: 800-255-3924
International Emergency: 813-248-0585

Material Safety Data Sheet

1. PRODUCT IDENTIFICATION

Product Name: **SA9 BATTERY PROTECTOR & SEALER 5 OZ AE**
Item No: **80370**
Product Type: **Aerosol coating**

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight%	ACGIH TLV: TWA	OSHA PEL:
MINERAL OIL 8042-47-5	20-30	5 mg/m^3 TWA (oil mist)	5 mg/m^3 (oil mist)
ACETONE 67-64-1	15-30	500 ppm TWA; 750 ppm STEL	1000 ppm TWA; 2400 mg/m^3 TWA
PROPANE 74-98-6	15-25	1000 ppm TWA	1000 ppm TWA; 1800 mg/m^3 TWA
XYLENE 1330-20-7	15-25	100 ppm TWA	100 ppm TWA; 435 mg/m^3 TWA
PETROLATUM 8009-03-8	10-20	5 mg/m^3 TWA (mist); 10 mg/m^3 STEL (mist)	Not Listed
ETHYL BENZENE 100-41-4	1-10	100 ppm TWA	100 ppm TWA; 435 mg/m^3 TWA

3. HAZARDS IDENTIFICATION

Toxicity: Deliberately concentrating and inhaling the vapor may be harmful or fatal. Exposure to vapors or mist may result in irritation of the respiratory tract. Long term exposure to high concentrations of vapor may cause lung, liver or kidney damage. May cause eye and skin irritation. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage (sometimes referred to as "solvent" or "painter's syndrome"). Symptoms include fatigue, concentration difficulties, anxiety, depression, rapid mood swings, and short-term memory loss.

Primary Routes of Entry: Eye and skin contact, ingestion, inhalation

Signs and Symptoms of Exposure: Excessive overexposure may cause giddiness, dizziness, headache, nausea and in extreme cases, unconsciousness and respiratory depression. May cause redness to eyes and irritation to nasal passages.

Component	Weight%	NTP	ACGIH Carcinogens	IARC
ACETONE 67-64-1	15-30	Not known	A4 - Not Classifiable as a Human Carcinogen	Not known
XYLENE 1330-20-7	15-25	male rat-no evidence; female rat-no evidence; male mice-no evidence; female mice-no evidence	A4 - Not Classifiable as a Human Carcinogen	Group 3: Monograph 71, 1999; Monograph 47, 1989
ETHYL BENZENE 100-41-4	1-10	male rat-clear evidence; female rat-some evidence; male mice-some evidence; female mice-some evidence	A3 Confirmed animal carcinogen with unknown relevance to humans	Group 2B Monograph 77, 2000

Medical Conditions Recognized as Being Aggravated by Exposure: Heart disease, respiratory disorders, liver and kidney diseases, amenia, rhythm disorders of the heart. Preexisting eye, skin and respiratory disorders may be aggravated by overexposure to this product.

4. FIRST AID MEASURES

Ingestion: Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

Inhalation: Move to fresh air in case of accidental inhalation of vapours. Oxygen or artificial respiration if needed. Obtain medical attention.

4. FIRST AID MEASURES

Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

5. FIRE FIGHTING MEASURES

Flash Point (°F/C): <0°F Based on propellant

Recommended Extinguishing Media: Carbon Dioxide, Dry Chemicals, Foam.

Special Fire-Fighting Procedures: Firefighters should wear self-contained breathing apparatus. Keep containers cool. Use equipment or shielding required to protect against bursting or venting of containers. Water spray may be ineffective on flames but should be used to keep fire-exposed containers cool.

Hazardous Products of Combustion: Oxides of carbon, Irritating vapors

Unusual Fire/Explosion Hazards: Contents under pressure. Exposure to temperatures over 120 degrees F. may cause bursting or venting. Use equipment or shielding to protect personnel from bursting containers.

Lower Explosive Limit: 1.0

Upper Explosive Limit: 12.8

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures: Maintain good ventilation. Take up with an inert absorbent. Store in a closed waste container until disposal.

7. HANDLING AND STORAGE

Storage: Store away from heat, sparks or open flame. Do not store at temperatures above 120 degrees F. Exposure to high temperatures may cause container to burst.

Handling: Avoid contact with skin and eyes. Do not inhale vapors. Do not puncture or incinerate container. Do not use near heat, sparks or open flame. Extinguish all flames, pilot lights and heaters. Turn off stoves, electric tools and appliances, and other sources of ignition. Intentionally concentrating and inhaling the vapor may be harmful or fatal. Use only in a well ventilated area. Vapors may accumulate readily and may ignite explosively. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Safety glasses

Skin: Rubber or plastic gloves.

Ventilation: General; local exhaust ventilation as necessary to control any air contaminants to within their exposure limits (or to the lowest feasible levels when limits have not been established) during the use of this product.

Respiratory Protection: An approved respirator (i.e. NIOSH, etc.) should be worn when exposures are expected to exceed the applicable limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Purple liquid

Odor: SOLVENT

Boiling Point: <0 to 292°F

pH: Does not apply

Solubility in Water: Nil

Specific Gravity: 0.74

VOC Content(Wt.%): 42.9% by weight; 321 g/l

Vapor Pressure: 70-80 psig

Vapor Density (Air=1): Heavier than air

Evaporation Rate: Faster than ether

10. STABILITY AND REACTIVITY

Chemical Stability: Stable at normal conditions

Hazardous Polymerization: Will not occur.

Incompatabilities: Strong oxidizers

Conditions to Avoid: Heat

Hazardous Products of Combustion: Oxides of carbon, Irritating vapors

11. TOXICOLOGICAL INFORMATION

See Section 3

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended Method of Disposal: Disposal should be made in accordance with federal, state and local regulations. This container may be recycled in aerosol recycling centers. Before offering for recycling, empty the can by using the product according to the label. If recycling is not available, wrap the container and discard in the trash.

US EPA Waste Number: D001 as per 40CFR 261.21

14. TRANSPORTATION INFORMATION

DOT (49CFR 172)

Domestic Ground Transport

DOT Shipping Name: Consumer Commodity (not more than one liter)
Hazard Class: ORM-D
UN/ID Number: None
Marine Pollutant: None

IATA

Proper Shipping Name: Consumer Commodity (Not more than 1 liter)
Class or Division: Class 9
UN/NA Number: ID 8000

IMDG

Proper Shipping: Aerosols, Limited Quantity
Hazard Class: Class 2.1
UN Number: UN 1950

15. REGULATORY INFORMATION

SARA 313 Chemicals: The following component(s) is listed as a SARA Section 313 Toxic Chemical.

XYLENE, ETHYL BENZENE

CALIFORNIA PROP 65:
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA Inventory Status:
Listed on Inventory: YES All components of this product are listed (or exempt) on the EPA TSCA inventory.

16. OTHER INFORMATION

Estimated NFPA Rating: HEALTH 2, FLAMMABILITY 4 , REACTIVITY 0
Estimated HMIS Classification: HEALTH 2, FLAMMABILITY 4, PHYSICAL HAZARD 0

NFPA is a registered trademark of the National Fire Protection Assn.
HMIS is a registered trademark of the National Paint and Coatings Assn.

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Revision Date: March/09/2007
Revision Number: 4

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Material Safety Data Sheet

1. PRODUCT IDENTIFICATION

Product Name: 122GA CHAIN LUBE 5 OZ AE
Item No: 80075
Product Type: Aerosol lubricant

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight%	ACGIH; TLV-TWA	OSHA PEL
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT NAPHTHENIC 64742-53-6	30-60	5 mg/m^3 TWA ACGIH	Not listed
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC 64742-52-5	10-30	Not listed	Not listed
PETROLEUM GASES, LIQUEFIED, SWEETENED 68476-86-8	10-30	Not listed	Not listed

3. HAZARDS IDENTIFICATION

Toxicity: Exposure to vapors or mist may result in irritation of the respiratory tract. Intentional misuse by concentrating and inhaling the vapor may be harmful or fatal. Harmful if swallowed. May cause eye and skin irritation. Prolonged exposure may cause liver and kidney effects and may affect the central nervous system.

Primary Routes of Entry: Eye and skin contact, ingestion, inhalation

Signs and Symptoms of Exposure: Excessive accidental exposure may cause headache, dizziness, nausea and mild respiratory irritation. May cause pain, redness or swelling of the eyes and excessive blinking and tear production. Skin redness.

Aggravated Medical Condition: Preexisting pulmonary and dermatological disorders.

4. FIRST AID MEASURES

Ingestion: Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

Inhalation: Move to fresh air in case of accidental inhalation of vapours. Obtain medical attention.

Skin Contact: Wash off with soap and water If skin irritation persists, call a physician

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

5. FIRE FIGHTING MEASURES

Flash Point °F(C°): Flammable aerosol based on flame projection test

Recommended Extinguishing Media: Carbon dioxide, Dry chemical, Foam

Special Fire-Fighting Procedures: Firefighters should wear self-contained breathing apparatus. Keep containers cool. Use equipment or shielding required to protect against bursting or venting of containers. Water spray may be ineffective on flames but should be used to keep fire-exposed containers cool.

Hazardous Products of Combustion: Oxides of carbon

Unusual Fire/Explosion Hazards: Contents under pressure. Exposure to temperatures over 120 degrees F. may cause bursting or venting. Keep containers cool.

Lower Explosive Limit: Not determined

Upper Explosive Limit: Not determined

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures: Eliminate all sources of ignition. Maintain good ventilation. Take up with an inert absorbent. Store in a closed waste container until disposal.

7. HANDLING AND STORAGE

Storage: Store away from heat, sparks or open flame. Do not store at temperatures above 100°F (38°C).

Handling: Do not use near heat, sparks or open flame. Do not inhale vapors. Avoid contact with skin and eyes. Wash hands before eating and smoking.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Safety glasses.

Skin: Neoprene or nitrile gloves recommended.

Ventilation: General; local exhaust ventilation as necessary to control any air contaminants to within their exposure limits (or to the lowest feasible levels when limits have not been established) during the use of this product.

Respiratory Protection: An approved organic vapor respirator should be worn when exposures are expected to exceed the applicable limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Brown liquid
Odor: Mild
Boiling Point: >500°F
pH: Does not apply
Solubility in Water: Nil
Specific Gravity: 0.87-0.97
VOC(Wt.%): 15.6%
Vapor Pressure: Not determined
Vapor Density (Air=1): >1
Evaporation Rate: <1 (butyl acetate = 1)

10. STABILITY AND REACTIVITY

Chemical Stability: Stable at normal conditions
Hazardous Polymerization: Will not occur
Incompatabilities: Strong oxidizers
Conditions to Avoid: Keep away from heat, sparks and open flame. - No smoking.
Hazardous Products of Combustion: Oxides of carbon

11. TOXICOLOGICAL INFORMATION

See Section 3

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended Method of Disposal: Disposal should be made in accordance with federal, state and local regulations. This container may be recycled in aerosol recycling centers. Before offering for recycling, empty the can by using the product according to the label. If recycling is not available, wrap the container and discard in the trash.

US EPA Waste Number: D001 as per 40CFR 261.21

14. TRANSPORTATION INFORMATION

DOT (49CFR 172)

U.S. Department of Transportation - DOT - 49 CFR (Ground)

DOT Shipping Name: Aerosols, Limited Quantity
Hazard Class: Class 2.1
UN/ID Number: UN 1950

IATA (Air)

Proper Shipping Name: Consumer Commodity (Not more than 1 liter)
Class or Division: Class 9
UN/ID Number: ID 8000

IMDG (Vessel)

Proper Shipping Name: Aerosols, Limited Quantity
Hazard Class: Class 2.1

UN Number: UN 1950

Marine Pollutant: None

15. REGULATORY INFORMATION

SARA 313 Chemicals: The following component(s) is listed as a SARA Section 313 Toxic Chemical.

NONE

California Proposition 65: No California Prop 65 chemicals are known to be present.

TSCA Inventory Status: All components of this product are listed (or exempt) on the EPA TSCA inventory.

16. OTHER INFORMATION

Estimated NFPA Rating: HEALTH 1, FLAMMABILITY 4 , REACTIVITY 0.
Estimated HMIS Classification: HEALTH 1, FLAMMABILITY 4, PHYSICAL HAZARD 0
(NFPA is a registered trademark of the National Fire Protection Association)
HMIS is a registered trademark of the National Paint and Coatings Association

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Revision Date: April 26, 2012
Revision Number: 5

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International Emergency: 813-248-0585

Material Safety Data Sheet

1. PRODUCT IDENTIFICATION

Product Name: **DIELECTRIC TUNE-UP GREASE 3 OZ**
Item No: **22058**
Product Type: **Lubricant**

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight%	ACGIH TLV: TWA	OSHA PEL:
POLYDIMETHYLSILOXANE 63148-62-9	>70	Not Listed	Not Listed
MODIFIED SILICON DIOXIDE 68611-44-9	1-10	Not Listed	Not Listed
OXIRANE, METHYL-, POLYMER 52624-57-4	0.5-5.0	Not Listed	Not Listed

3. HAZARDS IDENTIFICATION

Toxicity: May cause eye and skin irritation. Note: This product does not contain microcyrstalline silica.
Primary Routes of Entry: Eye and skin contact, ingestion, inhalation
Signs and Symptoms of Exposure: Overexposure may cause eye and skin redness.

Medical Conditions Recognized as Being Aggravated by Exposure: None known.

4. FIRST AID MEASURES

Ingestion: If swallowed, do NOT induce vomiting. Give victim two glasses of water, Call a physician immediately. Never give anything by mouth to an unconscious person.
Inhalation: Move to fresh air in case of accidental inhalation of vapors.
Skin Contact: Wash off with soap and water. If skin irritation persists, call a physician.
Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

5. FIRE FIGHTING MEASURES

Flash Point (°F/C): >200°F TCC
Recommended Extinguishing Media: Carbon Dioxide, Dry Chemicals, Foam.
Special Fire-Fighting Procedures: No special procedures.
Hazardous Products of Combustion: Oxides of carbon, Oxides of silicon
Unusual Fire/Explosion Hazards: None.

Lower Explosive Limit: Not determined
Upper Explosive Limit: Not determined

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures: Maintain good ventilation. Take up with an inert absorbent. Store in a closed waste container until disposal. Clean up spills thoroughly as residue is slippery.

7. HANDLING AND STORAGE

Storage: Store below 100 degrees F.
Handling: Avoid prolonged skin contact. Keep away from eyes.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Safety glasses
Skin: Rubber or plastic gloves.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: General; local exhaust ventilation as necessary to control any air contaminants to within their exposure limits (or to the lowest feasible levels when limits have not been established) during the use of this product.

Respiratory Protection: Not required under normal use. An approved respirator (i.e. NIOSH, etc.) should be worn when exposures are expected to exceed the applicable limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White, translucent grease
Odor: MILD
Boiling Point: Not determined
pH: Does not apply
Solubility in Water: Nil
Specific Gravity: 1.0
VOC Content(Wt.%): 0
Vapor Pressure: Not determined
Vapor Density (Air=1): Heavier than air
Evaporation Rate: <1 (butyl acetate =)

10. STABILITY AND REACTIVITY

Chemical Stability: Stable at normal conditions
Hazardous Polymerization: Will not occur.
Incompatabilities: Acids, Strong oxidizers, Reducing agents
Conditions to Avoid: Heat
Hazardous Products of Combustion: Oxides of carbon, Oxides of silicon

11. TOXICOLOGICAL INFORMATION

See Section 3

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended Method of Disposal: Disposal should be made in accordance with federal, state and local regulations.
US EPA Waste Number: NH - Not a RCRA Hazardous Waste Material

14. TRANSPORTATION INFORMATION

DOT (49CFR 172)

Domestic Ground Transport

DOT Shipping Name: Unrestricted
Hazard Class: None
UN/ID Number: None
Marine Pollutant: None

IATA

Proper Shipping Name: Not regulated
Class or Division: None
UN/NA Number: None

IMDG

Proper Shipping: Unrestricted
Hazard Class: None
UN Number: None

15. REGULATORY INFORMATION

SARA 313 Chemicals: The following component(s) is listed as a SARA Section 313 Toxic Chemical.

NONE

CALIFORNIA PROP 65:
No California Prop 65 chemicals are known to be present at or above the No Significant Risk Level.

TSCA Inventory Status:

Listed on Inventory: **YES** All components of this product are listed (or exempt) on the EPA TSCA inventory.

16. OTHER INFORMATION

Estimated NFPA Rating: HEALTH 1, FLAMMABILITY 1 , REACTIVITY 0
Estimated HMIS Classification: HEALTH 1, FLAMMABILITY 1, PHYSICAL HAZARD 0
NFPA is a registered trademark of the National Fire Protection Assn.
HMIS is a registered trademark of the National Paint and Coatings Assn.

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Revision Number: 1

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Material Safety Data Sheet

1. PRODUCT IDENTIFICATION

Product Name: **FAST ORANGE PUMICE LOTION 1GAL**
Item No: **25219**
Product Type: **Waterless hand cleaner**

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Percent	ACGIH 8 Hr. TWA:	OSHA 8 Hr. TWA:
Water 7732-18-5	75-85	Not Listed	Not Listed
PUMICE 1332-09-8	5-15	10 mg/m^3 (inhal); 3 mg/m^3 (resp)	15 mg/m^3 (total); 5 mg/m^3 (resp)
D-Limonene 5989-27-5	5-15	Not Established	Not Established
ETHOXYLATED C11-C16 ALCOHOL 127036-24-2	1-10	Not Listed	Not Listed
SILICA, QUARTZ 14808-60-7	0.1-1.0	0.1 mg/m^3 TWA respirable	0.1 mg/m^3 TWA respirable

3. HAZARDS IDENTIFICATION

Toxicity: Oral LD50 greater than 5000 mg/kg. Primary irritation tests show that this product is not a primary irritant.
Primary Routes of Entry: Eye and skin contact, ingestion, inhalation.
Signs and Symptoms of Exposure: None under normal conditons of use.

Ingredients	Percent	NTP:	ACGIH Carcinogens	IARC:
D-Limonene 5989-27-5	5-15	male rat-clear evidence; female rat-no evidence; male mice-no evidence; female mice-no evidence		
SILICA, QUARTZ 14808-60-7	0.1-1.0	Known Carcinogen	Not known	Group 1; Vol. 68; 1997

Medical Conditions Recognized as Being Aggravated by Exposure: None known

4. FIRST AID MEASURES

Ingestion: If swallowed, seek medical advice immediately and show this container or label
Inhalation: Immediate medical attention is not required.
Skin Contact: none under normal use
Eye Contact: In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice

5. FIRE FIGHTING MEASURES

Flash Point (°F/C): 193 degrees F. Method: Setaflash Closed Cup
Recommended Extinguishing Media: Carbon dioxide, chemical powder
Special Fire-Fighting Procedures: No special procedures.
Hazardous Products Formed by Fire or Thermal Decomposition: None anticipated
Unusual Fire/Explosion Hazards: None

Lower Explosive Limit: Not determined.

Upper Explosive Limit: Not determined.

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures: Rinse away with water or wipe up with a towel.

7. HANDLING AND STORAGE

Storage: Hand cleaner should be stored at temperatures between 40 degrees F. and 100 degrees F.
Handling: Follow all general safety precautions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Not required
Skin: Not required
Ventilation: Provide adequate ventilation
Respiratory Protection: not required under normal use

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White lotion with pumice
Odor: orange
Boiling Point (°F): Not determined.
pH: 7.0
Solubility in Water: SOLUBLE
Specific Gravity: 1.03
VOC Content(Wt.%): 7 % by weight
Vapor Pressure: Not Determined
Vapor Density (Air=1): Not Determined
Evaporation Rate: Not Determined

10. STABILITY AND REACTIVITY

Chemical Stability: Stable at normal conditions
Hazardous Polymerization: WILL NOT OCCUR
Incompatabilities: None known
Conditions to Avoid: Freezing
Hazardous Products Formed by Fire or Thermal Decomposition: None anticipated

11. TOXICOLOGICAL INFORMATION

See Section 3

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended Method of Disposal: Dispose of uncontaminated material through sewer system with permission of the authority responsible for that system.
US EPA Waste Number: NH - Not a RCRA Hazardous Waste Material

14. TRANSPORTATION INFORMATION

DOT (49CFR 172)

Domestic Ground Transport

DOT Shipping Name: Unrestricted
Hazard Class: NONE
UN/ID Number: None
Marine Pollutant: None

IATA

Proper Shipping Name: not regulated
Class or Division: None
UN/NA Number: None

IMDG

Proper Shipping: Unrestricted

Hazard Class: None
UN Number: None

15. REGULATORY INFORMATION

SARA 313 Chemicals: The following component(s) is listed as a SARA Section 313 Toxic Chemical.

SARA 313 Information
NONE

CALIFORNIA PROP 65:
No California Prop 65 chemicals are known to be present at or above the No Significant Risk Level.

TSCA Inventory Status:
Listed on Inventory: YES All components of this product are listed (or exempt) on the EPA TSCA inventory.

16. OTHER INFORMATION

Estimated NFPA Rating: HEALTH 1, FLAMMABILITY 2 , REACTIVITY 0
Estimated HMIS Classification: HEALTH 1, FLAMMABILITY 2, PHYSICAL HAZARD 0
NFPA is a registered trademark of the National Fire Protection Assn.
HMIS is a registered trademark of the National Paint and Coatings Assn.

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Revision Date: 01/23/2003
Revision Number: 1

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Material Safety Data Sheet

1. PRODUCT IDENTIFICATION

Product Name: **135EA HEAVY DUTY RUBBERIZED UNDERCOATING 16OZ AE**
Item No: **81833**
Product Type: **Aerosol coating**

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight%	ACGIH; TLV-TWA	OSHA PEL:
WATER 7732-18-5	<50	Not listed	Not Listed
CALCIUM CARBONATE 471-34-1	15-25	10 mg/m^3	Not Listed
SOLVENT NAPHTHA (PETROLEUM), MEDIUM ALIPH. 64742-88-7	5-15	Not listed	400 ppm TWA; 1600 mg/m^3 dust
ASPHALT (PETROLEUM) 8052-42-4	<10	Not listed	Not Listed
PROPANE 74-98-6	<10	1000 ppm	1000 ppm TWA; 1800 mg/m^3 TWA
BUTANE 106-97-8	<10	1000 ppm	800 ppm TWA; 1900 mg/m^3 TWA
KAOLIN 1332-58-7	<10	2 mg/m^3	15 mg/m^3 dust; 5 mg/m^3 respir. TWA
METHANOL 67-56-1	<3	200 ppm TWA; 250 ppm STEL	200 ppm TWA; 260 mg/m^3 TWA
CARBON BLACK 1333-86-4	0.1-1.0	3.5 mg/m^3 TWA	3.5 mg/m^3 TWA

3. HAZARDS IDENTIFICATION

Toxicity: May cause eye, skin and respiratory irritation. Excessive inhalation causes headache, dizziness, nausea, and incoordination. Long term exposure to high concentrations of vapor may cause lung, liver or kidney damage.

Primary Routes of Entry: Eye and skin contact, ingestion, inhalation

Signs and Symptoms of Exposure: Excessive accidental exposure may cause headache, dizziness, nausea and mild respiratory irritation. Overexposure may cause eye and skin redness.

Component	Weight%	NTP	ACGIH Carcinogens	IARC
SOLVENT NAPHTHA (PETROLEUM), MEDIUM ALIPH. 64742-88-7	5-15	male rat-some evidence, female rat-no evidence, male mice-no evidence, female mice-equivocal evidence		
ASPHALT (PETROLEUM) 8052-42-4	<10		A4 - Not classifiable as a human carcinogen	Group 3 Supplement 7, 1987; Monograph 35, 1985
KAOLIN 1332-58-7	<10		A4-Not classifiable as a human carcinogen	
CARBON BLACK 1333-86-4	0.1-1.0		Group A4 - Not classifiable as a human carcinogen	Group 2B; Monograph 65, 1996

Medical Conditions Recognized as Being Aggravated by Exposure: Persons with preexisting respiratory, liver, kidney, eye or skin diseases may be adversely affected.

4. FIRST AID MEASURES

Ingestion: Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

Inhalation: Move to fresh air in case of accidental inhalation of vapours. Oxygen or artificial respiration if needed. Obtain medical attention.

Skin Contact: Wash off with soap and water. If skin irritation persists, call a physician.

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

5. FIRE FIGHTING MEASURES

Flash Point °F(C°): <0°F Based on propellant

Recommended Extinguishing Media: Carbon Dioxide, Dry Chemicals, Foam.

Special Fire-Fighting Procedures: Firefighters should wear self-contained breathing apparatus. Keep containers cool. Use equipment or shielding required to protect against bursting or venting of containers. Water spray may be ineffective on flames but should be used to keep fire-exposed containers cool.

Hazardous Products of Combustion: Oxides of carbon

Unusual Fire/Explosion Hazards: Contents under pressure. Exposure to temperatures over 120 degrees F. may cause bursting or venting. Use equipment or shielding to protect personnel from bursting containers.

Lower Explosive Limit: 1.0

Upper Explosive Limit: 36.5

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures: Eliminate all sources of ignition. Maintain good ventilation. Take up with an inert absorbent. Store in a closed waste container until disposal.

7. HANDLING AND STORAGE

Storage: Store away from heat, sparks or open flame. Do not store at temperatures above 120 degrees F. Exposure to high temperatures may cause container to burst.

Handling: Do not use near heat, sparks or open flame. Do not puncture or incinerate container. Vapors may accumulate readily and may ignite explosively. Avoid contact with skin and eyes. Use in a well ventilated area to prevent irritation by vapors. Wash thoroughly after handling.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Safety glasses.

Skin: Neoprene or nitrile gloves recommended.

Ventilation: General; local exhaust ventilation as necessary to control any air contaminants to within their exposure limits (or to the lowest feasible levels when limits have not been established) during the use of this product.

Respiratory Protection: An approved organic vapor respirator should be worn when exposures are expected to exceed the applicable limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Black liquid

Odor: Solvent

Boiling Point: <0°F to 395°F

pH: Does not apply

Solubility in Water: Nil

Specific Gravity: 0.98

VOC Content(Wt.%): 28.5%

Vapor Pressure: Not determined

Vapor Density (Air=1): Heavier than air

Evaporation Rate: <1 (butyl acetate =1)

10. STABILITY AND REACTIVITY

Chemical Stability: Stable at normal conditions

Hazardous Polymerization: WILL NOT OCCUR.

Incompatabilities: Strong oxidizers

Conditions to Avoid: Keep away from heat, sparks and open flame. - No smoking

Hazardous Products of Combustion: Oxides of carbon

11. TOXICOLOGICAL INFORMATION

See Section 3

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended Method of Disposal: Disposal should be made in accordance with federal, state and local regulations. This container may be recycled in aerosol recycling centers. Before offering for recycling, empty the can by using the product according to the label. If recycling is not available, wrap the container and discard in the trash.

US EPA Waste Number: D001 as per 40CFR 261.21

14. TRANSPORTATION INFORMATION

DOT (49CFR 172)

Domestic Ground Transport

DOT Shipping Name: CONSUMER COMMODITY
Hazard Class: ORM-D
UN/ID Number: None

IATA

Proper Shipping Name: Consumer Commodity (Not more than 1 liter)
Class or Division: Class 9
UN/ID Number: ID 8000

IMDG

Proper Shipping: Aerosols, Limited Quantity
Hazard Class: Class 2.1
UN Number: UN 1950

Marine Pollutant: None

15. REGULATORY INFORMATION

SARA 313 Chemicals: The following component(s) is listed as a SARA Section 313 Toxic Chemical.

METHANOL

CALIFORNIA PROP 65:
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA Inventory Status:
Listed on Inventory: YES All components of this product are listed (or exempt) on the EPA TSCA inventory.

16. OTHER INFORMATION

Estimated NFPA Rating: HEALTH 2, FLAMMABILITY 3 , REACTIVITY 0.
Estimated HMIS Classification: HEALTH 2, FLAMMABILITY 3, PHYSICAL HAZARD 0

NFPA is a registered trademark of the National Fire Protection Assn.
HMIS is a registered trademark of the National Paint and Coatings Assn.

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Telephone No.: 1-87-Permatex (877) 376-2839

Revision Date: October/10/2008
Revision Number: 1

82327, 3110, SUPER LUBE SYNTHETIC LUBRICANT (SUPDAT)

Product and Company Identification
Composition/Information on Ingredients
Hazards Identification
First Aid Measures
Fire Fighting Measures
Accidental Release Measures
Handling and Storage
Exposure Controls/Personal Protection
Physical and Chemical Properties
Stability and Reactivity
Toxicological Information
Ecological Information
Disposal Considerations
Transport Information
Regulatory Information
Other Information / Hazmat Info / Hazcom Label

MSDS Safety Information

FSC:	9150
MSDS Date:	01/01/1994
MSDS Num:	CCRVL
Submitter:	N EN
LIIN:	00N074535
Tech Review:	11/08/1996
Status CD:	C
MFN:	01
Article:	N
Kit Part:	N
Responsible Party	62377
Name:	PERMATEX INDUSTRIAL
Address:	705 N MOUNTAIN RD
City:	NEWINGTON
State:	CT

Zip:	06111
Country:	US
Info Phone Number	800-641-7376
Emergency Phone Number	800-641-7376
Preparer's Name:	N/P
Proprietary Ind:	N
Review Ind:	N
Published:	Y
Special Project CD:	N
Cage:	62377
Address:	1001 TROUT BROOK CROSSING
City:	ROCKY HILL
State:	CT
Zip:	08067-3910
Country:	US
Phone:	800-641-7376

Ingredients

Cas:	71-55-6
Code:	M
RTECS #:	KJ2975000
Code:	M
Environmental Wt:	
Other REC Limits:	N/K
OSHA PEL:	350 PPM
Code:	M
Code:	
Code:	M
Code:	
Ozone Depleting Chemical:	1

Cas:	124-38-9
Code:	M
RTECS #:	FF6400000
Code:	M

Environmental Wt:	
Other REC Limits:	N/K
OSHA PEL:	5000 PPM
Code:	M
Code:	
Code:	M
Code:	
Ozone Depleting Chemical:	N

Cas:	75-65-0
Code:	M
RTECS #:	EO1925000
Code:	M
Environmental Wt:	
Other REC Limits:	N/K
OSHA PEL:	100 PPM
Code:	M
Code:	
Code:	M
Code:	
Ozone Depleting Chemical:	N

Cas:	109-87-5
Code:	M
RTECS #:	PA8750000
Code:	M
Environmental Wt:	
Other REC Limits:	N/K
OSHA PEL:	1000 PPM
Code:	M
Code:	
Code:	M
Code:	
Ozone Depleting Chemical:	N

Cas:	116-14-3
Code:	M
RTECS #:	KX4025000

Code:	M
Environmental Wt:	
Other REC Limits:	N/K
OSHA PEL:	N/K (FP N)
Code:	M
Code:	
Code:	M
Code:	
Ozone Depleting Chemical:	N

Cas:	
Code:	X
RTECS #:	9999999VO
Code:	M
Environmental Wt:	
Other REC Limits:	N/K
OSHA PEL:	N/K (FP N)
Code:	M
Code:	
Code:	M
Code:	
Ozone Depleting Chemical:	

Health Hazards Data

LD50 LC50 Mixture	NONE SPECIFIED BY MANUFACTURER.
Route Of Entry Inds - Inhalation:	YES
Skin:	YES
Ingestion:	YES
Carcinogenicity Inds - NTP:	NO
IARC:	NO
OSHA:	NO
Health Hazards Acute And Chronic	CHLOROCARBON MATLS HAVE PRODUCED SENSIT OF THE MYOCARDIUM TO EPINEPHRINE IN LAB ANIMALS & COULD HAVE A SIMILAR EFT IN HUMANS. ADRENOMIMETICS (EG, EPINEPHRINE)

	MAY BE CONTRA-INDICATED EXCEPT FOR LIFE-SUSTAINING USES IN HUMANS ACUTELY/CHRONIC ALLY EXPOSED T CHLOROCARBONS (FP N). POSS EYE IRRITANT. MOD TOX BY INGESTION.
Explanation Of Carcinogenicity	NOT RELEVANT
Signs And Symptions Of Overexposure	HEADACHE, NAUSEA, DIZZINESS, MENTAL CONFUSION, DEPRESSION, FATIGUE, LOSS OF APPETITE, COUGHING, VOMITING, LOSS OF SENSE OF BALANCE, VISUAL DISTURBANCES, IRRITATION TO RESPIRATORY TRACT. MAY CAUSE DERMATITIS ON PROLONGED CONTACT IN SENSITIVE INDIVIDUALS.
Medical Cond Aggravated By Exposure	1,1,1-TRICHLOROETHANE: DISEASES OF THE CENTRAL NERVOUS SYSTEM, HEART, LIVER, EYES AND SKIN; ALCOHOLISM.

First Aid

INGEST: DO NOT INDUCE VOMITING. KEEP INDIVIDUAL CALM. OBTAIN MEDICAL ATTENTION. INHAL: REMOVE TO FRESH AIR. IF SYMPTOMS PERSIST, OBTAIN MEDICAL ATTENTION. SKIN: WASH WITH SOAP AND WATER. EYES: FLUSH AT LEAST 15 MINUTES WITH WATER. OBTAIN ME DICAL ATTENTIN.

Spill Release Procedures

TAKE UP WITH AN INERT ABSORBENT. STORE IN A CLOSED CONTAINER UNTIL DISPOSAL.

Neutralizing Agent NONE SPECIFIED BY MANUFACTURER.

Waste Disposal Methods

Handling and Storage Precautions

Other Precautions	NO SMOKING IN AREA OF USE. DO NOT USE IN THE GENERALVICINITY OF ARC WELDING, OPEN FLAMES OR HOT SURFACES. HEAT AND/OR UVRADIATION MAY CAUSE THE FORMATION OF HCL AND/OR PHOSGENE (FP N).

Fire and Explosion Hazard Information

Flash Point Method:	TCC
Flash Point:	
Flash Point Text:	NONE
Autoignition Temp:	
Autoignition Temp Text:	N/A
Lower Limits:	8%
Upper Limits:	10.5%
Extinguishing Media	CARBON DIOXIDE, FOAM, DRY CHEMICAL.
Fire Fighting Procedures	WEAR NIOSH APPROVED PRESSURE DEMAND SCBA AND FULL PROTECTIVE EQUIPMENT (FP N).
Unusual Fire/Explosion Hazard	THERMAL DECOMPOSITION PRODUCTS MAY INCLUDE HCL AND PHOSGENE (FP N), TOXIC CHLORIDES. CANS MAY RUPTURE IN FIRES. COMPRESSED GASES: CARBON DIOXIDE.

Control Measures

Ventilation	PROVIDE ADEQUATE LOCAL VENTILATION TO MAINTAIN VAPOR CONCENTRATION BELOW TLV.
Protective Gloves	RUBBER OR PLASTIC GLOVES.
Eye Protection	ANSI APPRVD CHEM WORKERS GOGGS (FP N).
Other Protective Equipment	ANSI APPROVED EYE WASH & DELUGE SHOWER (FP N).
Work Hygienic Practices	NONE SPECIFIED BY MANUFACTURER.

Supplemental Safety and Health	MFR'S TRADE NAME/PART NO: LUBRICANT WITH TEFLON (GREASE).

Physical/Chemical Properties

HCC:	
NRC/State LIC No:	
Net Prop WT For Ammo:	
Boiling Point:	
B.P. Text:	165F,74C

Reactivity Data

Stability Indicator:	YES
Stability Condition To Avoid:	NONE SPECIFIED BY MANUFACTURER.
Materials To Avoid:	SOLVENT MAY REACT VIOLENTLY WITH ALUMINUM ON PROLONGED CONTACT.
Hazardous Decomposition Products:	HCL, PHOSGENE (FP N).
Hazardous Polymerization Indicator:	NO

Toxicological Information

Toxicological Information:	N/P

Ecological Information

Ecological:	N/P

MSDS Transport Information

Transport Information:	N/P

Regulatory Information

Sara Title III Information:	N/P
Federal Regulatory Information:	N/P
State Regulatory Information:	N/P

Other Information

Other Information:	N/P

HMIS HAZCOM Label

Product Name:	**82327, 3110, SUPER LUBE SYNTHETIC LUBRICANT (SUPDAT)**
Cage:	62377
Assigned IND:	N
Company Name:	PERMATEX INDUSTRIAL
Street:	1001 TROUT BROOK CROSSING
PO Box:	
City:	ROCKY HILL
State:	CT
Zipcode:	08067-3910
Country:	US
Health Emergency Phone:	800-641-7376
Label Required IND:	Y
Date Of Label Review:	11/12/1996
Status Code:	C
MFG Label NO:	
Label Date:	11/12/1996
Year Procured:	N/K
Origination Code:	G
Chronic Hazard IND:	N
Eye Protection IND:	YES
Skin Protection IND:	YES
Signal Word:	WARNING

Respiratory Protection IND:	YES
Health Hazard:	Moderate
Contact Hazard:	Slight
Fire Hazard:	Slight
Reactivity Hazard:	None

This information is derived from the Hazardous Material Information System which is utilized by the U.S. Department of Defense. IntraWEB, LLC and its Distributors in no manner whatsoever, expressly or implied warrants, states, or intends said information to have any application use or viability by or to any person or persons. Any person utilizing this information should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.

Permatex, Inc.
10 Columbus Blvd.
Hartford, CT 06106 USA
Telephone: 1-87-Permatex
(877) 376-2839
Emergency: 800-255-3924
International Emergency: 813-248-0585

Material Safety Data Sheet

1. PRODUCT IDENTIFICATION

Product Name: **51D PIPE JOINT COMPOUND 1PT**
Item No: **80045**
Product Type: **Sealant**

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	Weight Percent	ACGIH TLV:	OSHA PEL:
KAOLIN 1332-58-7	30-40	2 mg/m^3 dust TWA	15 mg/m^3 dust; 5 mg/m^3 respir. TWA
VEGETABLE OIL 68187-84-8	15-25	Not Listed	Not Listed
ROSIN 8050-09-7	15-25	sensitizer; reduce exposure to as low as possible	15 mg/m^3 total dust; 5 mg/m^3 respir.
2-PROPANOL 67-63-0	10-20	200 ppm TWA	400 ppm TWA; 980 mg/m^3 TWA
TALC 14807-96-6	1-10	2 mg/m^3 respir. dust TWA	20 mppcf TWA
TITANIUM DIOXIDE 13463-67-7	0.1-1.0	10 mg/m^3 TWA ACGIH	15 mg/m^3 TWA (total dust)
SILICA, QUARTZ 14808-60-7	0.1-1.0	0.05 mg/m^3 TWA respirable	0.1 mg/m^3 TWA respirable

3. HAZARDS IDENTIFICATION

Toxicity: May cause eye, skin and respiratory irritation. Oral LD50 greater than 5000 mg/kg.
Primary Routes of Entry: Eye and skin contact, ingestion, inhalation
Signs and Symptoms of Exposure: Excessive accidental exposure may cause headache, dizziness, nausea and mild respiratory irritation. Overexposure may cause eye and skin redness.

Ingredient	Weight Percent	NTP	ACGIH Carcinogens	IARC
KAOLIN 1332-58-7	30-40		A4-Not classifiable as a human carcinogen	
2-PROPANOL 67-63-0	10-20		A4 - Not classifiable as a human carcinogen	Group 3 Monograph 71, 1999; Supp.7, 1987; Monograph 15, 1977
TALC 14807-96-6	1-10	male rat-some evidence, female rat-clear evidence, male mice-no evidence, female mice-no evidence	A4- Not classifiable as a human carcinogen	Group 3 Supplement 7, 1987 Monograph 42, 1987
TITANIUM DIOXIDE 13463-67-7	0.1-1.0	male rat-negative, female rat-negative, male mice-negative, female mice-negative	A4	Group 2B; Vol 93,2006; Vol 47,1989
SILICA, QUARTZ 14808-60-7	0.1-1.0		A2 - Suspected Human Carcinogen	Group 1; Monograph 68, 1997 (inhaled)

Medical Conditions Recognized as Being Aggravated by Exposure: Preexisting eye, skin and respiratory disorders may be aggravated by overexposure to this product.

4. FIRST AID MEASURES

Ingestion: If swallowed, DO NOT induce vomiting. Keep individual calm. Obtain medical attention.
Inhalation: Move to fresh air in case of accidental inhalation of vapours. Obtain medical attention.
Skin Contact: Wash off with soap and water. If skin irritation persists, call a physician.

4. FIRST AID MEASURES

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

5. FIRE FIGHTING MEASURES

Flash Point (°F/C): 76 degrees F. Method: Tag Closed Cup
Recommended Extinguishing Media: Carbon Dioxide, Dry Chemicals, Foam.
Special Fire-Fighting Procedures: Firefighters should wear self-contained breathing apparatus. Water spray may be ineffective on flames but should be used to keep fire-exposed containers cool.
Hazardous Products of Combustion: Aldehydes, Oxides of carbon, Carboxylic acids
Unusual Fire/Explosion Hazards: Closed containers may rupture or explode when exposed to extreme heat.

Lower Explosive Limit: 2.3
Upper Explosive Limit: 12.7

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures: Eliminate all sources of ignition. Maintain good ventilation. Take up with an inert absorbent. Store in a closed waste container until disposal. Residues may be cleaned up with isopropyl alcohol.

7. HANDLING AND STORAGE

Storage: Store away from heat, sparks or open flame. Do not store at temperatures above 120 degrees F.
Handling: Avoid contact with skin and eyes. Do not inhale vapors. Keep container closed when not in use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Safety glasses
Skin: Rubber or plastic gloves.
Ventilation: General; local exhaust ventilation as necessary to control any air contaminants to within their exposure limits (or to the lowest feasible levels when limits have not been established) during the use of this product.
Respiratory Protection: An approved respirator (i.e. NIOSH, etc.) should be worn when exposures are expected to exceed the applicable limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Black paste
Odor: Alcohol
Boiling Point: 180 degrees F.
pH: Does not apply
Solubility in Water: Partial
Specific Gravity: 1.28 @ 25 degrees C.
VOC Content(Wt.%): 16.5% by weight
Vapor Pressure: 33 mm Hg @ 68 degrees F.
Vapor Density (Air=1): 2.07
Evaporation Rate: Not available

10. STABILITY AND REACTIVITY

Chemical Stability: Stable at normal conditions
Hazardous Polymerization: Will not occur.
Incompatabilities: Strong oxidizers
Conditions to Avoid: Keep away from heat, sparks and open flame. - No smoking
Hazardous Products of Combustion: Aldehydes, Oxides of carbon, Carboxylic acids

11. TOXICOLOGICAL INFORMATION

See Section 3

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended Method of Disposal: Disposal should be made in accordance with federal, state and local regulations.
US EPA Waste Number: D001 as per 40CFR 261.21

14. TRANSPORTATION INFORMATION

DOT (49CFR 172)

Domestic Ground Transport

DOT Shipping Name:	Consumer Commodity (not more than one liter)
Hazard Class:	ORM-D
UN/ID Number:	None
Marine Pollutant:	None

IATA

Proper Shipping Name:	Consumer Commodity (Not more than 1 liter)
Class or Division:	Class 9
UN/NA Number:	ID 8000

IMDG

Proper Shipping:	Resin Solution, Flammable, Limited Quantity
Hazard Class:	Class 3 PGIII
UN Number:	UN 1866

15. REGULATORY INFORMATION

SARA 313 Chemicals: The following component(s) is listed as a SARA Section 313 Toxic Chemical.

NONE

CALIFORNIA PROP 65:
No California Prop 65 chemicals are known to be present.

TSCA Inventory Status:
Listed on Inventory: YES All components of this product are listed (or exempt) on the EPA TSCA inventory.

16. OTHER INFORMATION

Estimated NFPA Rating:	HEALTH 2, FLAMMABILITY 3 , REACTIVITY 0
Estimated HMIS Classification:	HEALTH 2, FLAMMABILITY 3, PHYSICAL HAZARD 0

NFPA is a registered trademark of the National Fire Protection Assn.
HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared By:	Denise Boyd, Health and Safety Manager	**Revision Date:**	12/15/2006
Company:	Permatex. Inc. 10 Columbus Blvd. Hartford, CT USA 06106	**Revision Number:**	3

Permatex, Inc.
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Material Safety Data Sheet

1. PRODUCT IDENTIFICATION

Product Name: **6BR SENSOR SAFE BLUE SILICONE RTV 3 OZ**
Item No: **80022**
Product Type: **Elastomeric rubber**

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight%	ACGIH; TLV-TWA	OSHA PEL
POLY (DIMETHYLSILOXANE), HYDROXY TERMINATED 70131-67-8	30-50	Not listed	Not listed
LIMESTONE 1317-65-3	20-40	Not listed	15 mg/m^3
CALCIUM CARBONATE 471-34-1	15-40	10 mg/m^3	Not listed
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT 64742-47-8	<5	Not listed	Not listed
VINYL OXIMINOSILANE 2224-33-1	<5	Not listed	Not listed
STEARIC ACID 57-11-4	<2	Not listed	Not listed
2-BUTANONE OXIME 96-29-7	0.5-2.0	Not listed	Not listed

3. HAZARDS IDENTIFICATION

Toxicity: May cause eye and skin irritation. When this product if exposed to moisture, butanone oxime may be formed. May be harmful if swallowed. May irritate lips, gums, tongue, mouth, nose and throat.

Primary Routes of Entry: Eye and skin contact, ingestion, inhalation

Signs and Symptoms of Exposure: Butanone oxime produced during curing is toxic and irritates eyes, nose and throat. Overexposure to the silane may cause coma and respiratory failure.

Medical Conditions Recognized as Being Aggravated by Exposure: Preexisting eye, skin and respiratory disorders may be aggravated by overexposure to this product.

4. FIRST AID MEASURES

Ingestion: Rinse mouth. If swallowed, DO NOT induce vomiting. Keep individual calm. Obtain medical attention.

Inhalation: Move to fresh air in case of accidental inhalation of vapours. Obtain medical attention.

Skin Contact: Wipe off material with paper towel or cloth. Wash off with soap and water. If skin irritation persists, call a physician.

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

5. FIRE FIGHTING MEASURES

Flash Point °F(C°): >200°F TCC

Recommended Extinguishing Media: Carbon Dioxide, Dry Chemicals, Foam.

Special Fire-Fighting Procedures: Water spray may be ineffective on flames but should be used to keep fire-exposed containers cool.

Hazardous Products of Combustion: Oxides of nitrogen, Methyl ethyl ketone, possibly methyl ethyl ketoxime, Silica fume, Oxides of carbon, Formaldehyde

Unusual Fire/Explosion Hazards: None.

Lower Explosive Limit: Not determined

Upper Explosive Limit: Not determined

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures: Wipe or scrape up spill material. Maintain good ventilation for large spills. Place scrap material in a well-ventilated area and allow to cure to rubber. Clean up spills thoroughly as residue is slippery.

7. HANDLING AND STORAGE

Storage: Store in a dry area below 90 degrees F. Keep container closed when not in use.
Handling: Avoid contact with skin and eyes. Do not wear contact lenses. Do not inhale vapors. Do not take internally.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Safety glasses.
Skin: Neoprene or nitrile gloves recommended.
Ventilation: General; local exhaust ventilation as necessary to control any air contaminants to within their exposure limits (or to the lowest feasible levels when limits have not been established) during the use of this product.
Respiratory Protection: An approved organic vapor respirator should be worn when exposures are expected to exceed the applicable limits.

Comments: When heated to temperatures above 300 degrees F. in the presence of air, this product can form formaldehyde vapors. Formaldehyde is a potential cancer hazard and a known skin and respiratory sensitizer. Safe handling conditions may be maintained by keeping vapor concentrations below the OSHA permissible limit for formaldehyde

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Blue paste
Odor: Mild
Boiling Point: Not applicable, polymeric material
pH: Does not apply
Solubility in Water: Polymerized
Specific Gravity: 1.43
VOC(Wt.%): <4%
Vapor Pressure: <5 mm Hg
Vapor Density (Air=1): 3.0
Evaporation Rate: Not Determined

10. STABILITY AND REACTIVITY

Chemical Stability: Stable at normal conditions
Hazardous Polymerization: Will not occur.
Incompatabilities: Polymerized by contact with moisture., Strong oxidizers, Acids, Iron
Conditions to Avoid: Exposure to moisture.
Hazardous Products of Combustion: Oxides of nitrogen, Methyl ethyl ketone, possibly methyl ethyl ketoxime, Silica fume, Oxides of carbon, Formaldehyde

11. TOXICOLOGICAL INFORMATION

See Section 3

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL CONSIDERATIONS

Recommended Method of Disposal: Disposal should be made in accordance with federal, state and local regulations..
US EPA Waste Number: NH - Not a RCRA Hazardous Waste Material

14. TRANSPORTATION INFORMATION

DOT (49CFR 172)

Ground Transport (DOT)

DOT Shipping Name: Not Regulated
Hazard Class: None
UN/ID Number: None

IATA

Proper Shipping Name: Not regulated
Class or Division: None

14. TRANSPORTATION INFORMATION

UN/ID Number: None

IMDG

Proper Shipping: Not regulated
Hazard Class: None
UN Number: None

Marine Pollutant: None

15. REGULATORY INFORMATION

SARA 313 Chemicals: The following component(s) is listed as a SARA Section 313 Toxic Chemical.

NONE

California Proposition 65: No California Prop 65 chemicals are known to be present at or above the No Significant Risk Level

TSCA Inventory Status: All components of this product are listed (or exempt) on the EPA TSCA inventory.

16. OTHER INFORMATION

Estimated NFPA Rating: HEALTH 1, FLAMMABILITY 1 , REACTIVITY 0.
Estimated HMIS Classification: HEALTH 1, FLAMMABILITY 1, PHYSICAL HAZARD 0
NFPA is a registered trademark of the National Fire Protection Assn.
HMIS is a registered trademark of the National Paint and Coatings Assn.

Prepared By: Denise Boyd, Manager-Environmental, Health & Safety
Company: Permatex. Inc. 10 Columbus Blvd. Hartford, CT USA 06106
Telephone No.: 1-87-Permatex (877) 376-2839

Revision Date: July 15, 2009
Revision Number: 1

MATERIAL SAFETY DATA SHEET
PETROLATUM
Panef Inc.

 Revision Date: 01/01/12

Section 1: Chemical Product and Company Identification

Product Name: Petrolatum
Manufacturer: Panef Inc.
5700 West Douglas Ave.
Milwaukee, WI 53218
Total Pages: 4

Product Number: Panef P-7, P-16, P-13-5
Emergency Telephone: 800-535-5053
Information Telephone: 414-464-7200

Section 2: Composition / Information on Ingredients

Chemical Name	CAS	Wt. %	Hazardous I n Blend
White Petrolatum USP	8009-03-8	100%	No

Other
Petrolatum or petroleum jelly is a microcrystalline wax with a defined oil content. Microcrystalline waxes consist mainly of iso- and cyclo-paraffins with some alkylated aromatic hydrocarbons.

Section 3: Hazards Identification

Route (s) of Entry: **Skin**
Yes

Emergency Overview: This material is not hazardous according to the OSHA Hazard Communication Standard, 29CFR 1910.1200
Eye Contact: This product is minimally irritating to the eyes upon direct contact. Based on testing of similar products and/or components.
Skin Contact: This product is minimally irritating to the skin upon direct contact. Based on testing of similar products and/or components.
Inhalation: This product has a low vapor pressure and is not expected to present an inhalation hazard at ambient conditions. Caution should be taken to prevent aerosolization or misting of this product. See Section 8 for oil mist exposure limits.
Ingestion: Do not ingest. This product is practically non-toxic by ingestion. This product has laxative properties and may result in abdominal cramps and diarrhea.
Other: Petrolatums are nontoxic and some petrolatums have been approved for food and medicinal use.
Exposure to a large single dose or repeated smaller doses of petrolatum by inhalation, aspiration, or ingestion leading to aspiration, can lead to lipid pneumonia or lipid granuloma of the lung. These are low-grade, chronic, localized tissue reactions. Shortness of breath and cough are the most common symptoms.

Section 4: First Aid Measures

Eyes: Immediately flush eyes with large amounts of water and continue flushing until irritation subsides. If material is hot, treat for thermal burns and take to hospital immediately.
Skin: Remove contaminated clothing. Wash contaminated area thoroughly with soap and water. If material is hot, submerge injured area in cold water. If victim is severely burned, remove to a hospital immediately.
Inhalation: This material has a low vapor pressure and is not expected to present an inhalation exposure at ambient conditions. If vapor or mist is generated when the material is heated or handled, remove victim from exposure.
Ingestion: Do not induce vomiting due to aspiration hazard. If vomiting should occur, lower head below knees to avoid aspiration.

Material Safety Data Sheet
PETROLATUM

Section 5: Fire Fighting Measures

Flash Point: (method) 400ºF (204.4ºC) **Flammable Limits:** **LEV:** None **UEL:** None

Autoignition Temperature: ND
Extinguishing Media: Use dry chemical, form, or carbon dioxide.
Unusual Fire and Explosion Hazards: Dense smoke may be generated while burning. Carbon monoxide, carbon dioxide, and other oxides may be generated as products of combustion.
Special Fire Fighting Procedures: Water may be ineffective but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

NFPA Ratings: Health 0; Flammability 1; Reactivity 0.

Section 6: Accidental Release Measures

Personnel Safeguard: Consult Health Effect Information in Section 3, Personal Protection Information is Section 8, Fire & Explosion Information I Section 5, and Stability and Reactivity Information in Section 10. Remove all sources of ignition.
Regulatory Notifications: Notify appropriate authorities of spill.
Containment and Clean Up: Contain spill immediately. Do not allow spill to enter sewers or watercourses. Absorb with appropriate inert material such as sand, clay etc. Large spills may be picked up using vacuum pumps, shovels, buckets or other means and placed in drums or other suitable containers.

Section 7: Handling and Storage

Handling: Avoid breathing vapors or mist. Avoid contact with eyes. Avoid prolonged or repeated contact with skin. Wash thoroughly after handing. Wash clothing prior to reuse. May be slippery when spilled.
Fire extinguishers should be kept readily available. See NFPA 30 and OSHA 1910.106 – Flammable and Combustible Liquids.
Storage: Do not transfer to unmarked containers. Store in closed containers away from heat, sparks, open flame, or oxidizing materials.

Section 8: Exposure Controls / Personal Protection

Exposure Limits and Guidelines: This product does not contain any components with OSHA or ACGIH exposure limits. If oil mist is generated, exposure limits apply.
Eye/Face Protection: Eye protection is not required under conditions of normal use. If material is handled such that it could be splashed into eyes, wear plastic face shield or splash-proof safety goggles.
Skin Protection: No skin protection is required for single, short duration exposures. For prolonged or repeated exposures, use impervious clothing (boots, gloves, aprons, etc.) over parts of the body subject to exposure. If handling hot material, se insulated protective clothing (boots, gloves, aprons, etc.). Launder soiled clothes. Properly dispose of contaminated leather articles including shoes, which cannot be decontaminated.
Respiratory Protection: Respiratory protection is not required under conditions of normal use. If vapor or mist is generated when the material is heated or handled, use an organic vapor respirator with a dust and mist filter. All respirators must be NIOSH certified.
Personal Hygiene: Consumption of food and beverage should be avoided in work areas where hydrocarbons are present. Always wash hand and face with soap and water before eating, drinking or smoking.
Engineering Controls/Work Practices- Ventilation: If vapor or mist is generated when the materials is heated or handled, adequate ventilation is accordance with good engineering practice must be provided to maintain concentrations below the specified exposure or flammable limits

Section 9: Physical / Chemical Characteristics

Appearance:	White semi-solid	Melting Point:	125-130ºF (51.7-54.4ºC)
Odor:	Odorless	Molecular Weight:	Varies
Vapor Pressure:	NA	Specific Gravity:	0.86 – 0.87
Vapor Density (Air=1):	NA	Average Carbon Number:	NA
Evaporation Rate (EE=1):	NA	Pour Point:	NA
pH:	NA	Viscosity @ 100ºF:	NA
Percent volatile by volume:	NA	Viscosity @ 40ºC:	NA
Boiling Point:	650ºF (343.3ºC)	Solubility:	Insoluble in water, Soluble in hydrocarbons
Volatile Organic Content:	NA	Octanol/Water Coefficient:	Log Kow = NA

Material Safety Data Sheet
PETROLATUM

Section 10: Stability and Reactivity

Conditions to Avoid: Heat, sparks and flame.
Incompatibility (materials to avoid): May react with strong oxidizing agents.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, and other oxides may be generated as products of combustion.
Hazardous Polymerization: Will not occur.
Chemical Stability: Stable.

Section 11: Toxicology Information

arcinogenicity: Petrolatums were not carcinogenic in mice when applied dermally or administered subcutaneously or in rats when injected intraperitoneally or included in the diet for two years.

Section 12: Ecological Information

None available

Section 13: Disposal Considerations

Regulatory Information: All disposals must comply with federal, state and local regulations. The material, if spilled or discarded, may be a regulated waste. Refer to state and local regulations. Caution! If regulated solvents are used to clean up spilled material, the resulting waste mixture may be regulated. Department of Transportation (DOT) regulations may apply for transporting this material when spilled.
Waste Disposal Methods: Waste material may be landfilled or incinerated at an approved facility. Materials should be recycled if possible.

Section 14: Transportation Information

U. S. Department of Transportation (DOT)
Highway/Rail (Bulk): Not regulated
Highway/Rail (Non-Bulk): Not regulated
International Information
Vessel (IMDG): Not regulated
Air (ICAO): Not regulated

Section 15: Regulatory Information

INVENTORIES:

Australian (AICS):	Listed
Canadian (DSL):	Listed
Chinese:	Listed
European EC/EINECS:	Listed
Japanese ENCS:	Listed
Korean (KCL):	Listed
Philippine (PICCS):	Listed
U. S. (TSCA):	Listed

Section 15: Regulatory Information (continued)

U. S. Sara Section 313: This product is not known to contain any SARA, Title III, Section 313 Reportable Chemicals at or greater than 1.0% (0.1% for carcinogens).

U. S. SARA 311/312 Categories:

Acute:
Chronic:
Fire:
Pressure:
Reactive:
Not Regulated: X

Canadian WHMIS Classification: Not a Controlled Product under WHMIS.

Section 16: Other Information

Disclaimer: The information contained herein is based on data available. However, no warranty is expressed or implied regarding the accuracy of the data or the results obtained from use thereof. Because the information contained herein may be applied under conditions beyond our control, we assume no responsibility for its use.

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 584.00

Revision Date: April 24, 2015

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Petroleum Ether

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Flammable liquids (Category 2). Highly flammable liquid and vapor (H225). Keep away from heat, sparks, open flames, and hot surfaces (P210).

Hazard class: Aspiration hazard (Category 1). May be fatal if swallowed and enters airways (H304).

Hazard class: Germ cell mutagenicity (Category 1). May cause genetic defects (H340). Obtain special instructions before use (P201). Do not handle until all safety precautions have been read and understood (P202). Use personal protective equipment as required (P281).

Hazard class: Carcinogenicity (Category 1). May cause cancer (H350). Obtain special instructions before use (P201).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Petroleum ether	8032-32-4	Unspecified	Unspecified	
Synonyms: Ligroine; Naphtha				

SECTION 4 — FIRST AID MEASURES

Immediately call a POISON CENTER or physician.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353).
If swallowed: Rinse mouth. Immediately call a POISON CENTER or physician. Do NOT induce vomiting (P331).

SECTION 5 — FIRE FIGHTING MEASURES

Class IA flammable liquid.
Flash point: -40 °C Flammable limits: Lower: 1.1% Upper: 5.9% Autoignition Temperature: 288 °C
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
H-1
F-4
R-0

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all ignition sources and ventilate area. Contain spill with sand or other inert absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #3. Store with hydrocarbons, oils, esters and aldehydes.
Store in a dedicated flammables cabinet. If a flammables cabinet is not available, store in Flinn Saf-Stor ™ can.
Keep container tightly closed (P233). Keep cool (P235). Take precautionary measures against static discharge (P243). Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling. Use only in a hood or well-ventilated area (P271).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Clear, colorless liquid. Natural gas-like odor.
Soluble: Insoluble in water. Miscible with many organic solvents.
Not an ether, a low boiling fraction of petroleum distillate.

Boiling point: 36-60 ^{o}C
Specific gravity: 0.640
Vapor density: 2.5
Vapor pressure: 400 mmHg

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Toxic, irritant
Chronic effects: Possible mutagen
Target organs: Central nervous system

ORL-RAT LD_{50}: >5 g/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: >3 g/kg

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #18b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Petroleum Distillates, N.O.S. Hazard class: 3, Flammable liquid. UN number: UN1268.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (232-453-7), RCRA code D001.

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: April 24, 2015

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 590.00

Revision Date: February 6, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Phenol Red Solution

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **N/A**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Phenol red, sodium salt	34487-61-1	$C_{19}H_{13}NaO_5S$	376.36	0.02%
Water	7732-18-5	H_2O	18.00	99.9%

Synonym: Phenol red indicator solution

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #9. Store with dyes, indicators and stains.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Red liquid. Odorless.

pH indicator: 6.8 yellow to 8.4 red.

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Good, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: February 6, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 589.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Phenol Red

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

Hazard class: Specific target organ toxicity, single exposure; respiratory tract irritation (Category 3). May cause respiratory irritation (H335). Avoid breathing dust or fumes (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Phenol red, sodium salt	34487-61-1	$C_{19}H_{13}NaO_5S$	376.36	
Synonym: Phenolsulfonephthalein indicator				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water (P302+P352). **If skin irritation occurs:** Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #9. Store with dyes, indicators and stains.
Keep container tightly closed (P233). Store in a cool, dry place. Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271). Will stain skin, clothing, and surfaces.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Bright to dark red crystal or powder. Odorless.
Soluble: Water

pH indicator: 6.8 yellow to 8.4 red.

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (252-057-8).

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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WARD'S NATURAL SCIENCE ESTABLISHMENT INC. -- PHENOLPHTHALEIN PH INDICATOR -- 6810-00D003517

========== Product Identification ==========

Product ID:PHENOLPHTHALEIN PH INDICATOR
MSDS Date:07/06/1993
FSC:6810
NIIN:00D003517
MSDS Number: BXGCG
=== Responsible Party ===
Company Name:WARD'S NATURAL SCIENCE ESTABLISHMENT INC.
Box:92912
City:ROCHESTER
State:NY
ZIP:14692-9012
Country:US
Info Phone Num:716-359-2502
Emergency Phone Num:716-226-6177/334-4222/800-424-9300
Preparer's Name:ALEXANDER A. PICCIRILLI
CAGE:EO227
=== Contractor Identification ===
Company Name:WARD'S NATURAL SCIENCE ESTABLISHMENT INC.
Box:92912
City:ROCHESTER
State:NY
ZIP:14692-9012
Country:US
Phone:716-359-2502
CAGE:EO227
Company Name:WARDS NATURAL SCIENCE ESTABLISHMENT INC
Address:5100 W HENRIETTA RD
Box:92912
City:ROCHESTER
State:NY
ZIP:14692-9012
Country:US
Phone:(716) 359-2502
CAGE:63759

========== Composition/Information on Ingredients ==========

Ingred Name:PHENOLPHTHALEIN
CAS:77-09-8
RTECS #:SM8380000
Fraction by Wt: 1%
Other REC Limits:NONE RECOMMENDED

Ingred Name:ISOPROPYL ALCOHOL (SARA 313)
CAS:67-63-0
RTECS #:NT8050000
Fraction by Wt: 70%
Other REC Limits:NONE RECOMMENDED
OSHA PEL:400 PPM
ACGIH TLV:400 PPM/500STEL;9495

Ingred Name:WATER
CAS:7732-18-5
RTECS #:ZC0110000

Fraction by Wt: 29%
Other REC Limits:NONE RECOMMENDED
OSHA PEL:NOT RELEVANT
ACGIH TLV:NOT RELEVANT

Hazards Identification

LD50 LC50 Mixture:ORAL LD50 (RAT) IS UNKNOWN.
Routes of Entry: Inhalation:YES Skin:NO Ingestion:NO
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:TARGET ORGANS:EYE, SKIN, CNS, RESPIRATORY AND GASTROINTESTINAL TRACTS. ACUTE- HARMFUL IF INHALED OR INGESTED. EXPOSURE TO HIGH VAPOR CONCENTRATIONS MAY CAUSE NARCOSIS. CAUSES EYE IRRITATION. MAY CAUSE SKIN IRRITATION, DRYING, DEFATTING ANDCRACKING. CHRONIC- UNKNOWN.
Explanation of Carcinogenicity:NONE
Effects of Overexposure:IRRITATION, HEADACHE, DIZZINESS, NAUSEA, VOMITING, DROWSINESS, SLEEPINESS, SKIN DRYNESS AND DEFATTING
Medical Cond Aggravated by Exposure:PERSONS WITH PRE-EXISTING SKIN DISORDERS, EYE PROBLEMS OR IMPAIRED RESPIRATORY FUNCTION MAY BE MORE SUSCEPTIBLE TO THE EFFECTS OF THIS PRODUCT.

First Aid Measures

First Aid:CALL PHYSICIAN IF SYMPTOMS PERSIST. EYE:IMMEDIATELY FLUSH WITH WATER FOR 15 MINUTES. HOLD EYELIDS OPEN. CALL PHYSICIAN. SKIN:WASH WITH SOAP & WATER. INHALED:REMOVE TO FRESH AIR. PROVIDE CPR/OXYGEN IF NEEDED. ORAL:IF CONSCIOUS, DRINK WATER & INDUCE VOMITING. CALL A PHYSICIAN/POISON CONTROL CENTER IMMEDIATELY. NEVER GIVE FLUID OR INDUCE VOMITING IF PATIENT IS UNCONSCIOUS OR HAS CONVULSIONS.

Fire Fighting Measures

Flash Point Method:TCC
Flash Point:71.0F,21.7C
Autoignition Temp:Autoignition Temp Text:852F
Lower Limits:6%
Upper Limits:12%
Extinguishing Media:USE CARBON DIOXIDE, "ALCOHOL" FOAM, OR DRY CHEMICAL (ABC). COOL FIRE EXPOSED CONTAINERS WITH WATER SPRAY.
Fire Fighting Procedures:WEAR FIRE FIGHTING PROTECTIVE EQUIPMENT AND A NIOSH-APPROVED SELF CONTAINED BREATHING APPARATUS. USE FLOODING AMOUNT OF WATER IN EARLY STAGE OF FIRE.
Unusual Fire/Explosion Hazard:CONTAINERS MAY RUPTURE DUE TO HEAT OF FIRE. VAPORS MAY ACCUMULATE AND TRAVEL TO IGNITION SOURCES DISTANCE FROM HANDLING SITE; FLASH-FIRE CAN RESULT.

Accidental Release Measures

Spill Release Procedures:WEAR PROTECTIVE EQUIPMENT. ELIMINATE SOURCES OF IGNITION. VENTILATE AREA. REMOVE SPILL WITH NON-FLAMMABLE ABSORBENT SUCH AS SAND. PLACE IN CONTAINER FOR DISPOSAL. PREVENT LIQUID FROM ENTERING SEWERS, WATERWAYS. WASH SPILL SITE WITH SOAP AND WATER.
Neutralizing Agent:NOT RELEVANT

Handling and Storage

Handling and Storage Precautions:STORE IN TIGHTLY CLOSED CONTAINERS IN

FLAMMABLE LIQUID STORAGE ROOM/CABINET. AVOID EXCESSIVE HEAT. KEEP AWAY FROM INCOMPATIBLE MATERIALS.
Other Precautions:FLAMMABLE. DO NOT GET IN EYES, ON SKIN OR ON CLOTHING. AVOID INHALATION OF VAPORS. KEEP OUT OF REACH OF CHILDREN. OBEY HAZARD WARNING LABEL. FOR LABORATORY USE ONLY. NOT FOR DRUG, FOOD/HOUSEHOLD USE. USE WITH ADEQUATE VENTILATION.

========== Exposure Controls/Personal Protection ==========

Respiratory Protection:NONE NORMALLY NEEDED. IF TLV IS EXCEEDED OR FOR SYMPTOMS OF OVER EXPOSURE, WEAR NIOSH-APPROVED ORGANIC VAPOR RESPIRATOR OR SUPPLIED AIR RESPIRATOR. IN EMERGENCY, WEAR A NIOSH-APPROVED POSITIVE-PRESSUR E SELF-CONTAINED BREATHING APPARATUS.
Ventilation:MECHANICAL (GENERAL AND/OR LOCAL EXHAUST, EXPLOSION-PROOF) VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S).
Protective Gloves:NATURAL RUBBER, NEOPRENE
Eye Protection:SAFETY GLASSES+FACE SHIELD/CHEM GOGGLES
Other Protective Equipment:EYE WASH STATION & SAFETY SHOWERS SHOULD BE AVAILABLE IN THE IMMEDIATE VICINITY OF ANY POTENTIAL EXPOSURE.
Work Hygienic Practices:WASH HANDS BEFORE EATING, DRINKING, SMOKING, OR USING TOILET FACILITIES. WASH CONTAMINATED CLOTHING BEFORE REUSE.
Supplemental Safety and Health

========== Physical/Chemical Properties ==========

HCC:F3
NRC/State Lic Num:NOT RELEVANT
Boiling Pt:B.P. Text:179F,82C
Melt/Freeze Pt:M.P/F.P Text:-128F,-89C
Vapor Pres:33 @ 68F
Vapor Density:2.07
Spec Gravity:APPROX. 0.8
Solubility in Water:COMPLETE
Appearance and Odor:CLEAR, COLORLESS LIQUID - SWEET PLEASANT ODOR
Percent Volatiles by Volume:99

========== Stability and Reactivity Data ==========

Stability Indicator/Materials to Avoid:YES
STRONG OXIDIZING AGENTS
Stability Condition to Avoid:HIGH HEAT, SPARKS, OPEN FLAMES AND OTHER SOURCES OF IGNITION
Hazardous Decomposition Products:MAY EMIT CARBON MONOXIDE, CARBON DIOXIDE.

========== Disposal Considerations ==========

Waste Disposal Methods:DISPOSE IN AN APPROVED INCINERATOR OR CONTRACT WITH LICENSED CHEMICAL WASTE DISPOSAL SERVICE. DISCHARGE, TREATMENT OR DISPOSAL IS SUBJECT TO FEDERAL, STATE OR LOCAL LAWS. WHEN EMPTY, THROUGHLY RINSE C ONTAINER WITH WATER BEFORE DISPOSAL.

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particular situation.

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 592.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Phenolphthalein Alcohol Solution

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Flammable liquids (Category 2). Highly flammable liquid and vapor (H225). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).
Hazard class: Carcinogenicity (Category 1B). May cause cancer (H350). Obtain special instructions before use (P201). Do not handle until all safety precautions have been read and understood (P202).
Hazard class: Reproductive toxicity and germ cell mutagenicity (Category 2). Suspected of damaging fertility or the unborn child and causing genetic defects (H361+H341). Use personal protective equipment as required (P281).
Hazard class: Acute toxicity, oral (Category 4). Harmful if swallowed (H302). Do not eat, drink or smoke when using this product (P270).
Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).
Hazard class: Specific target organ toxicity, single exposure (Category 1). Causes damage to organs (H370).
Addition of denaturant makes the product poisonous. Cannot be made nonpoisonous. Phenolphthalein is categorized as "Reasonably anticipated to be a human carcinogen" by the National Toxicology Program (first listed in 2000).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Phenolphthalein	77-09-8	$C_{20}H_{14}O_4$	318.31	2% or less
Ethyl alcohol, denatured	64-17-5	C_2H_5OH	46.07	98% or more

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340). **If in eyes:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351 +P338). **If eye irritation persists:** Get medical advice or attention (P337+P313). **If on skin (or hair):** Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353). **If swallowed:** Rinse mouth. Call a POISON CENTER or physician if you feel unwell (P302+P301+P312).

SECTION 5 — FIRE FIGHTING MEASURES

Class IB flammable liquid due to ethyl alcohol content.
Flash point: 21 °C
When heated, releases flammable fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher (P370+P378).

NFPA CODE
H-2
F-3
R-0

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all ignition sources and ventilate area. Contain the spill with sand or other inert absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #9. Store with dyes, indicators and stains. Store in a dedicated flammables cabinet. If a flammables cabinet is not available, store in Flinn Saf-Stor™ can.
Keep container cool and tightly closed (P233 & P235). Use explosion-proof electrical and ventilating equipment (P241). Take precautionary measures against static discharge (P243).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).
Exposure guidelines: (as ethyl alcohol) PEL 1000 ppm (OSHA), Ceiling 1000 ppm (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless, clear solution if neutral or acidic solution. Pink, clear solution if basic. Alcohol odor.

pH indicator: 8.2 colorless to 10 pink

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with oxidizers, peroxides, acids, acid chlorides, acid anhydrides, alkali metals, ammonia, moisture, heat, open flames, or any source of ignition.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Eye irritation, nausea, dizziness, headache.
Chronic effects: Liver damage, reproductive, teratogenic effects, possible carcinogen (IARC-2B, NTP-R)
Target organs: Eyes, skin, central nervous system, liver, reproductive system.

ORL-MAN TLD_0: 29 mg/kg (as phenolphthalein)
IHL-RAT LC_{50}: 20,000 ppm/10H (as ethyl alcohol)
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #18a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Ethyl alcohol solution. Hazard class: 3, Flammable liquid. UN number: UN1170.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 591.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Phenolphthalein

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Germ cell mutagenicity (Category 2). Suspected of causing genetic defects (H341). Obtain special instructions before use (P201). Do not handle until all safety precautions have been read and understood (P202). Use personal protective equipment as required (P281).

Hazard class: Carcinogenicity (Category 1B). May cause cancer (H350). Phenolphthalein is categorized as "Reasonably anticipated to be a human carcinogen" by the National Toxicology Program (first listed in 2000).

Hazard class: Reproductive toxicity (Category 2). Suspected of damaging fertility or the unborn child (H361).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Phenolphthalein	77-09-8	$C_{20}H_{14}O_4$	318.31	
Synonym: 3,3-Bis(4-hydroxyphenol)-1(3H)-isobenzofuranone				

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Wipe up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #9. Store with dyes, indicators and stains.
Keep container tightly closed. Store in a cool, dry place. Use only in a hood or in a well ventilated area.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or in a well ventilated area.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Pale yellow powder. Odorless.
Soluble: Alcohol, alkalies, and ether. Insoluble in water.

Melting point: 262.5 ^{o}C
Specific gravity: 1.277
pH indicator: 8.2 colorless to 10 pink.

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant, laxative, nausea, vomiting, gastritis
Chronic effects: Possible carcinogen (IARC-2B, NTP-R)
Target organs: G.I. tract

ORL-MAN TLD_0: 29 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (201-004-7).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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Material Safety Data Sheet

24 Hour Emergency Phone Numbers:
Medical: 1-800-327-3874
1-513-558-5111
Transportation:
1-800-535-5053
1-352-323-3500

NOTE: National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

IMPORTANT: Provide this information to employees, customers, and users of this product. Read this MSDS before handling or disposing of this product. This product is covered by the OSHA Hazard Communication Standard and this document has been prepared in accordance with requirements of this standard. All abbreviated terms used in this MSDS are further described in Section 16.

Section 1 - Chemical Product / Company Information

This Material Safety Data Sheet is available in Canadian French and Hispanic American Spanish upon request.
Esta hoja de datos de la seguridad de los materiales está disponible en francés canadiense y en español a su solicitud.
Los Datos de Serguridad del Producto pueden obtenerse en Espanol si lo riquiere.

Product Name: VOC Compliant Phenoseal Does It All White and Colors

Revision Date: 02/03/2006

Product UPC Number: 5113600005, 5113600101, 5113600511, 5113600521, 5113600524, 5113602101, 5113602102, 5113603102, 5113604102, 5113606102, 5113609102, 5113616102, 5113624117, 5113630101, 5113699012, 5113699013, 5113699014, 5113699016

Supercedes: 07/13/2004

Product Use/Class: Latex Caulk

MSDS Number: 00061014001

Manufacturer: **DAP Inc.**
2400 Boston Street Suite 200
Baltimore, MD 21224-4723
888-327-8477 (non-emergency matters)

Section 2 - Composition / Information On Ingredients

Chemical Name	CASRN	WT%	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	Skir
Talc, non-fibrous	14807-96-6	20-25	2 MGM3	N.E.	N.E.	20 mppcf	N.E.	N.E.	No
2,2,4-Trimethyl-1,3-pentanediol monoisobutyrate	25265-77-4	0.5-1.5	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	No
Titanium dioxide	13463-67-7	0.5-1.5	10 MGM3	N.E.	N.E.	15 MGM3	N.E.	N.E.	No
Carbon Black	1333-86-4	0.0-1.5	3.5 MGM3	N.E.	N.E.	3.5 MGM3	N.E.	N.E.	No
Vinyl acetate	108-05-4	<0.07	10 PPM	15 PPM	N.E.	N.E.	N.E.	N.E.	No
Acetaldehyde	75-07-0	<0.03	N.E.	N.E.	25 PPM	200 PPM	N.E.	N.E.	No

Exposure Notes:

CASRN	Exposure Note
14807-96-6	The talc (CAS number 14807-96-6) within this product naturally contains a non-fibrous tremolite (CAS number 14567-73-8), non-fibrous serpentine (CAS number 12135-86-3), and non-fibrous anthophyllite (CAS number 17068-78-9). Refer to 29 CFR 1910.1000 Table Z 3 for the permissible exposure limits associated with non-fibrous talc and these naturally occurring incidental constituents

Important: Listed Permissible Exposure Levels (PEL) are from the U.S. Dept. of Labor OSHA Final Rule Limits (CFR 29 1910.1000); these limits may vary between states.

Note: An employee's skin exposure to substances having a "YES" in the "SKIN" column in the table above shall be prevented or reduced to the extent necessary under the circumstances through the use of gloves, coveralls, goggles or other appropriate personal protective equipment, engineering controls or work practices

Section 3 - Hazards Identification

Emergency Overview: A white, off-white or colored paste with a slight solvent odor. WARNING! Harmful if swallowed or absorbed through the skin. May cause eye, skin, nose, throat and respiratory tract irritation.

Refer to other MSDS sections for other detailed information.

Effects Of Overexposure - Eye Contact: May cause eye irritation.

Effects Of Overexposure - Skin Contact: May cause skin irritation. Harmful if absorbed through the skin. Prolonged or repeated contact with skin may cause irritation.

Effects Of Overexposure - Inhalation: Harmful if inhaled. Inhalation of high vapor concentrations can cause CNS-depression and narcosis. Inhalation may cause irritation to the respiratory tract (nose, mouth, mucous membranes).

Effects Of Overexposure - Ingestion: Harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: Prolonged and repeated skin contact may cause irritation and possibly dermatitis. Repeated or prolonged exposure may cause respiratory system damage. Overexposure may cause kidney, cardiovascular, skin and liver damage.

This product contains vinyl acetate which is classified as a class 2B carcinogen by IARC. Vinyl acetate was found to cause cancer in the respiratory tract of laboratory animals. There is no evidence that vinyl acetate causes cancer in humans. The IARC published a monograph on vinyl acetate (1995). In this monograph, IARC indicates "there is inadequate evidence in humans for carcinogenicity of vinyl acetate. There is limited evidence in experimental animals for the carcinogenicity of vinyl acetate." Normally, this lack of conclusive evidence would place a substance in the IARC 3 classification (not classified as a human carcinogen). However, because vinyl acetate is metabolized to acetaldehyde, which has an IARC 2B (possibly carcinogenic to humans) classification, it also has been listed under Category 2B.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Eye Contact

Medical Conditions which May be Aggravated by Exposure: None known.

Section 4 - First Aid Measures

First Aid - Eye Contact: In case of contact, immediately flush eyes with large quantities of water for at least 15 minutes until irritation subsides. Get medical attention immediately.

First Aid - Skin Contact: Wash off immediately with soap and plenty of water. Remove and wash contaminated clothing.

First Aid - Inhalation: If inhaled, remove to fresh air. If breathing is difficult, leave the area to obtain fresh air. If continued breathing difficulty is experienced, get medical attention immediately.

First Aid - Ingestion: If swallowed, DO NOT INDUCE VOMITING. Get medical attention immediately.

Note to Physician: No Information.

COMMENTS: Call Medical Emergency at 1-800-327-3874 if any irritation or complication arise from any of the above routes of entry.

Section 5 - Fire Fighting Measures

Flash Point, F: Greater than 200 degrees Fahrenheit
Method: (Seta Closed Cup)

Lower Explosive Limit, %: Not Established
Upper Explosive Limit, %: Not Established

Extinguishing Media: Carbon Dioxide, Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: No special protective measures against fire required.

Special Firefighting Procedures: Wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear. Use water spray to cool exposed surfaces.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Wear proper protective equipment as specified in Section 8. Use absorbent material or scrape up dried material and place in container.

Section 7 - Handling And Storage

Handling: KEEP OUT OF REACH OF CHILDREN! DO NOT TAKE INTERNALLY. Use only with adequate ventilation. Avoid breathing vapor and contact with eyes, skin and clothing. Wash thoroughly after handling. Open all windows and doors or use other means to ensure cross-ventilation and fresh air entry during application and drying. Odor is not an adequate warning for hazardous conditions.

Storage: Close container after each use. Store containers away from excessive heat and freezing. Do not store at temperatures above 120 degrees F. Store away from caustics and oxidizers.

Section 8 - Exposure Controls / Personal Protection

Precautionary Measures: Please refer to other sections and subsections of this MSDS.

Engineering Controls: Good general ventilation should be sufficient to control airborne levels. Ensure adequate ventilation, especially in confined areas. Local ventilation of emission sources may be necessary to maintain ambient concentrations below recommended exposure limits.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment. A NIOSH-approved air purifying respirator with an organic vapor cartridge or canister may be necessary under certain circumstances where airborne concentrations are expected to exceed exposure limits. A respiratory protection program that meets the OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin Protection: Rubber gloves.

Eye Protection: Goggles or safety glasses with side shields.

Other protective equipment: Not required under normal use.

Hygienic Practices: Wash hands before breaks and at the end of workday. Remove and wash contaminated clothing before re-use.

Section 9 - Physical And Chemical Properties

Boiling Range:	Not Established	**Vapor Density:**	Heavier Than Air
Odor:	Slight Solvent	**Odor Threshold:**	Not Established
Appearance:	A white, off-white or colored paste	**Evaporation Rate:**	Slower Than n-Butyl Acetate
Solubility in H2O:	Not Established	**Specific Gravity:**	1.285
Freeze Point:	Not Established	**pH:**	Between 7.0 and 12.0
Vapor Pressure:	Not Established	**Viscosity:**	Not Established
Physical State:	Paste		

When reported, vapor pressure of this product has been calculated theoretically based on its constituent makeup and has not been determined experimentally.

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Excessive heat and freezing.

Incompatibility: Incompatible with strong bases and oxidizing agents.

Hazardous Decomposition Products: Normal decomposition products, i.e., COx, NOx.

Hazardous Polymerization: Hazardous polymerization will not occur under normal conditions.

Stability: Stable under recommended storage conditions.

Section 11 - Toxicological Information

Product LD50: Not Established **Product LC50:** Not Established

CASRN	Chemical Name	LD50	LC50
108-05-4	Vinyl acetate	----------	Rat:11400 mg/m3/4H
75-07-0	Acetaldehyde	----------	Rat:13300 ppm/4H

Carcinogenicity:

CAS No.	Chemical Name	ACGIH	OSHA	IARC	NTP
13463-67-7	Titanium dioxide	-----	-----	Classification not possible from current data.	-----
108-05-4	Vinyl acetate	Confirmed animal carcinogen with unknown relevance to humans.	-----	Possible carcinogen.	-----
75-07-0	Acetaldehyde	Confirmed animal carcinogen with unknown relevance to humans.	-----	Possible carcinogen.	Anticipated carcinogen.

Significant Data with Possible Relevance to Humans: None

Section 12 - Ecological Information

Ecological Information: Ecological injuries are not known or expected under normal use.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance with all federal, state and local regulations. State and Local regulations/restrictions are complex and may differ from Federal regulations. Responsibility for proper waste disposal is with the owner of the waste.

EPA Waste Code if Discarded (40 CFR Section 261): None

Section 14 - Transportation Information

DOT Proper Shipping Name:	None	**Packing Group:**	N.A.
DOT Technical Name:	None	**Hazard Subclass:**	N.A.
DOT Hazard Class:	N.A.	**DOT UN/NA Number:**	None

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category:

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Immediate Health Hazard, Chronic Health Hazard

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

None

Toxic Substances Control Act:

All ingredients in this product are either on TSCA inventory list, or otherwise exempt.

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None

U.S. State Regulations:

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product:

Chemical Name	CAS Number
Non-Hazardous Polymer	Proprietary
Water	7732-18-5
Non-Hazardous Plasticizer	Proprietary

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%:

Chemical Name	CAS Number
Non-Hazardous Polymer	Proprietary
Water	7732-18-5
Non-Hazardous Plasticizer	Proprietary

California Proposition 65:

Warning: The following ingredients present in the product are known to the State of California to cause cancer:

Chemical Name	CAS Number	Definition	Date Listed
Acetaldehyde	75-07-0	Carcinogenic.	Listed: April 1, 1988

Warning: The following ingredients present in the product are known to the State of California to cause birth defects or other reproductive harm.

None

Section 16 - Other Information

HMIS Ratings:

Health: 1 Flammability: 1 Reactivity: 0

VOLATILE ORGANIC COMPOUNDS, GR/LTR: 83.6 LB/GAL: 0.7 WT%: 3.893

REASON FOR REVISION:

Legend:

N.A. – Not Applicable
N.E. – Not Established
N.D. – Not Determined
VOC – Volatile Organic Compound
PEL – Permissible Exposure Limit
TLV – Threshold Limit Value
STEL – Short Term Exposure Limit
LD50 – Lethal Dose 50
F – Degree Fahrenheit
MSDS – Material Safety Data Sheet

ACGIH – American Conference of Governmental Industrial Hygienists
SARA – Superfund Amendments and Reauthorization Act of 1986
NJRTK – New Jersey Right-to-Know Law
OSHA – Occupational Safety and Health Administration
HMIS – Hazardous Materials Identification System
NTP – National Toxicology Program
CEIL – Ceiling Exposure Limit
LC50 – Lethal Concentration 50
C – Degree Celcius
CASRN – The Chemical Abstracts Service Registry Number

DAP believes the data and statements contained herein are accurate as of the date hereof. They are offered in good faith as typical values and not as a product specification. **NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE WITH REGARD TO THE INFORMATION HEREIN PROVIDED OR THE PRODUCT TO WHICH THE INFORMATION REFERS.** Since this document is intended only as a guide to the appropriate use and precautionary

handling of the referenced product by a properly trained person, it is therefore the responsibility of the user to (i) review the recommendations with due consideration for the specific context of the intended use and (ii) determine if they are appropriate.

<End of MSDS>

Hoja de datos de la seguridad de los materiales

Números telefónicos de emergencia las 24 horas:
Emergencias médicas: 1-800-327-3874
1-513-558-5111
Transporte:
1-800-535-5053
1-352-323-3500

NOTA: Los números de emergencia del Centro de Respuesta Nacional sólo se deben usar en caso de emergencias químicas que involucren un derramamiento, incendio, exposición o accidente que tengan que ver con químicos

IMPORTANTE: Lea esta hoja de datos de la seguridad de los materiales antes de manipular o desechar este producto, y entregue esta información a los empleados, clientes y usuarios de este producto. Este producto está cubierto por la norma de comunicación de riesgos OSHA, y este documento fue preparado de acuerdo con los requisitos de dicha norma. Todos los términos abreviados utilizados en este documento se describen con más detalles en la sección 16.

Sección 1 - Información del producto químico/ compañía

Esta hoja de datos de la seguridad de los materiales está disponible en francés canadiense y en español a su solicitud.
On peut demander cette MSDS a la langue Francaise Canadienne.

Nombre de producto:	VOC Compliant Phenoseal Does It All White and Colors	**Fecha de revisión:**	02/03/2006
Número de UPC del producto:	5113600005, 5113600101, 5113600511, 5113600521, 5113600524, 5113602101, 5113602102, 5113603102, 5113604102, 5113606102, 5113609102, 5113616102, 5113624117, 5113630101, 5113699012, 5113699013, 5113699014, 5113699016	**Reemplaza a:**	07/13/2004
Uso/ clase del producto:	Calafateo de Latex	**Número de hoja de datos (MSDS):**	00061014001
Fabricante:	**DAP Inc.** **2400 Boston Street Suite 200** **Baltimore, MD 21224-4723** **888-327-8477 (asuntos de no emergencia)**		

Sección 2 - Composición / Información sobre los Ingredientes

Nombre Químico	CASRN	Peso%	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEI
Talco, forma de no-fibroso	14807-96-6	20-25	2 MGM3	N.E.	N.E.	20 mppcf	N.E.	N.E.
Monisobutirato De 2, 2, 4 - Trimetil - 1, 3 - Pentanodiol	25265-77-4	0.5-1.5	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.
Dioxidodetitanio	13463-67-7	0.5-1.5	10 MGM3	N.E.	N.E.	15 MGM3	N.E.	N.E.
Carbon Black	1333-86-4	0.0-1.5	3.5 MGM3	N.E.	N.E.	3.5 MGM3	N.E.	N.E.
Acetato De Vinilo	108-05-4	<0.07	10 PPM	15 PPM	N.E.	N.E.	N.E.	N.E.
Aldehídoacético	75-07-0	<0.03	N.E.	N.E.	25 PPM	200 PPM	N.E.	N.E.

Notas sobre la exposición:

CASRN	Notas sobre la exposición
14807-96-6	El talco (el número de CAS dentro de este producto contiene naturalmente un tremolite de no-fibroso (de CAS 14567-73-8

	número), la serpentina de no-fibroso (de CAS 12135-86-3 número), y anthophyllite de no-fibroso (de CAS 17068-78-9 número). Refiérase a 29 CFR 1910.1000 Mesa Z 3 para la exposición permisible limitan asociado con talco de no-fibroso y estos ocurriendo naturalmente componentes casuales.

Importante: Los niveles de exposición permitidos (PEL) señalados son suministrados por el Dept. del Trabajo de EE.UU., Límites de la norma final OSHA (CFR 29 1910.1000); Estos límites pueden variar de estado a estado.

Nota: Se debe evitar o reducir al máximo la exposición de la piel de un empleado a substancias que tengan "SÍ" en la columna "PIEL" en la tabla anterior, según lo permitan las circunstancias mediante el uso de guantes, ropa de protección, gafas de seguridad y otros equipos personales de protección, controles de ingeniería o prácticas de trabajo.

Sección 3 - Identificación de riesgos

Generalidades sobre las emergencias: Un blanco, lejos-blanco o coloró pasta con un olor. ¡ADVERTENCIA! Es dañino si se traga o absorbe por la piel. Podría causar irritación de los ojos, piel, nariz, garganta y tracto respiratorio.

Consulte otras secciones de la hoja de datos de seguridad de los materiales para más información detallada.

Efectos de la sobre exposición - Contacto visual: Podría causar irritación a los ojos.

Efectos de la sobre exposición - Contacto de la piel: Podría causar irritación de la piel. Dañino si se absorbe por la piel. El contacto prolongado o repetido con la piel podría causar irritación.

Efectos de la sobre exposición - Inhalación: Es dañino si se inhala. La inhalación de concentraciones altas de vapor pueden causar la depresión-CNS y narcosis. La inhalación puede causar irritación de las vías respiratorias (nariz, boca, membranas mucosas).

Efectos de la sobre exposición - Ingestión: Dañino si se traga.

Efectos de la sobre exposición - Riesgos crónicos: El contacto prolongado y repetido de la piel podría causar irritación y posiblemente dermatitis. La exposición repetida o prolongada podría causar daños al sistema respiratorio. La sobre exposición podría causar daños cardiovasculares y en los riñones, piel e hígado.

Este producto contiene acetato de vinilo que es clasificado como un cancerígeno de clase 2B por IARC. El acetato del vinilo se encontró para causar el cancer en el tracto respiratorio de animales de laboratorio. No hay la evidencia que acetato de vinilo causa el cancer en humanos. El IARC publicó una monografía en el acetato (1995) del vinilo. En esta monografía, IARC indica "hay la evidencia inadecuada en humanos para el carcinogenicity de acetato de vinilo. Allí es limitado la evidencia en animales experimentales para el carcinogenicity de acetato de vinilo." Normalmente, esta falta de la evidencia conclusiva colocaría una substancia en el IARC 3 clasificación (no clasificado como un cancerígeno humano). Sin embargo, porque acetato de vinilo es metabolizado al acetaldehyde, que tiene un IARC 2B (posiblemente cancerígeno a humanos) la clasificación, se ha listado también abajo Categoría 2B.

Ruta(s) principal de entrada: El Contacto de la piel, la Absorción de Piel, Aspiración, el Contacto Visual

Condiciones médicas que se pueden agravar a causa de la exposición: Ninguno conocido.

Sección 4 - Medidas de primeros auxilios

Primeros auxilios - Contacto visual: En caso de contacto, enjuague los ojos de inmediato con grandes cantidades de agua por al menos 15 minutos hasta que la irritación ceda. Obtenga atención médica de inmediato.

Primeros auxilios - Contacto de la piel: Lávese inmediatamente con jabón y agua abundante. Retire y lave la ropa contaminada.

Primeros auxilios - Inhalación: Si se inhala, salga al aire fresco. Si se dificulta la respiración, abandone el área para obtener aire fresco. Si se experimenta dificultad continua para respirar, busque atención médica de inmediato.

Primeros auxilios - Ingestión: Si se traga, NO PROVOQUE EL VÓMITO. Obtenga atención médica de inmediato.

Nota para el médico: Ninguna Información.

COMENTARIOS: Llame para emergencias médicas al 1-800-327-3874 si surgiera cualquier irritación o complicación de cualquiera de las rutas de entrada anteriores.

Sección 5 - Medidas para combatir incendios

Punto de inflamación, F: Más que 200 grados Fahrenheit
Método: (Seta Closed Cup)

Límite explosivo menor, %: No Establecido

Límite explosivo mayor, %: No Establecido

Medios para extinguir: El Bióxido de carbono, Seca Sustancia Química, la Espuma, Niebla de Agua

Riesgos inusuales de incendio y explosión: No se requieren medidas de protección especiales contra el fuego.

Procedimientos especiales para combatir incendios: Use un aparato para respiración auto-contenida con demanda de presión (aprobado por el Instituto NIOSH o equivalente) y equipo completo de protección. Use rociador de agua para enfriar las superficies expuestas.

Sección 6 - Medidas en caso de emisión accidental

Pasos a seguir en el caso de emisión o derramamiento de materiales: Use el equipo de protección correcto según lo especifica la Sección 8. Use material absorbente o raspe el material seco y coloque en un contenedor.

Sección 7 - Manejo y almacenamiento

Manejo: ¡MANTENGA LEJOS DEL ALCANCE DE LOS NIÑOS! NO TOME INTERNAMENTE. Use únicamente con ventilación adecuada. Evitar respirar los vapores y el contacto con los ojos, la piel y la ropa. Lave a fondo después de manipular. Abra todas las ventanas y puertas o use otro medios para garantizar una ventilación cruzada y la entrada de aire fresco durante la aplicación y el secado. Sentir el olor no es una advertencia adecuada de condiciones peligrosas.

Almacenamiento: Cierre el contenedor después de cada uso. Almacene los contenedores lejos del calor y congelamiento excesivos. No almacene a temperaturas por encima de 120 grados F. Almacene lejos de substancias cáusticas y oxidantes.

Sección 8 - Controles de la exposición/ Protección personal

Medidas de precaución: Ninguna Información.

Controles de ingeniería: Una buena ventilación general debería ser suficiente para controlar los niveles de transporte por el aire. Asegurarse de una ventilación adecuada, especialmente en locales cerrados. Puede ser necesaria la ventilación local de las fuentes de emisión para mantener las concentraicones ambientales por debajo de los límites de exposición recomendados.

Protección respiratoria: En caso de ventilación insuficiente, use equipo respiratorio adecuado. Un respirador para purificar el aire, aprobado por el NIOSH con cartucho de vapor orgánico podría ser necesario bajo ciertas circunstancias donde se espera que las concentraciones de transporte por el aire superen los límites de exposición. Se debe seguir un programa de protección respiratoria que cumpla con los requisitos de OSHA 1910.134 y ANSI Z88.2 cada vez que las condiciones del lugar de trabajo exijan el uso de un respirador.

Protección de la piel: guantes de goma

Protección de la visión: Gafas de seguridad con protectores laterales.

Otro equipo de protección: no se precisa en el uso normal.

Prácticas higiénicas: Lávense las manos antes de los descansos y después de terminar la jornada laboral. Quitar y lavar la ropa contaminada antes de reutilizar.

Sección 9 - Propiedades físicas y químicas

Rango de ebullición: No Establecido
Olor: El Solvente leve
Aspecto: Un blanco, lejos-blanco o coloró pasta.
Solubilidad en H2O: No Establecido
Punto de congelamiento: No Establecido
Presión del vapor: No Establecido
Estado físico: Paste

Densidad del vapor: Más pesado Que Aéreo
Umbral de olor: No Establecido
Índice de evaporación: Más lento Que Acetato de N-butilo
Gravedad específica: 1.285
pH: Entre 7.0 y 12.0
Viscosidad: No Establecido

(Ver sección 16 para la leyenda de las abreviaturas)

Sección 10 - Estabilidad y reactividad

Condiciones a evitar: Calentamiento y congelamiento excesivos.

Incompatibilidad: Incompatible con bases fuertes y agentes oxidantes.

Productos de descomposición peligrosa: Productos de descomposición normal, es decir, COx, NOx.

Polimerización peligrosa: No ocurrirá polimerización peligrosa bajo condiciones normales.

Estabilidad: Estable bajo las condiciones de almacenamiento recomendadas.

Sección 11 - Información toxicológica

LD50 del producto: No Establecido **LC50 del producto:** No Establecido

CASRN	Nombre Químico	LD50	LC50
108-05-4	Acetato De Vinilo	----------	Rat:11400 mg/m3/4H
75-07-0	Aldehídoacético	----------	Rat:13300 ppm/4H

Carcinogenicidad:

Número CAS	Nombre Químico	ACGIH	OSHA	IARC	NTP
13463-67-7	Dioxidodetitanio	-----	-----	La clasificación no posible de datos actuales.	-----

108-05-4	Acetato De Vinilo	El cancerígeno animal confirmado con la aplicabilidad desconocida a humanos.	-----	El cancerígeno posible.	-----
75-07-0	Aldehídoacético	El cancerígeno animal confirmado con la aplicabilidad desconocida a humanos.	-----	El cancerígeno posible.	El cancerígeno anticipado.

Datos significativos con posible relevancia para los humanos: Ninguno

Sección 12 - Información ecológica

Información ecológica: No se conocen ni esperan daños ecológicos bajo uso normal.

Sección 13 - Información sobre desechos

Información sobre desechos: Deseche los materiales de acuerdo con todas las normas federales, estatales y locales. Las normas/ restricciones estatales y locales son complejas y pueden diferir de las normas federales. La responsabilidad de eliminar los desechos correctamente recae en el propietario de los desechos.

Código de desechos de EPA en caso de desecho (CFR 40 Sección 261): Ninguno

Sección 14 - Información sobre transporte

Nombre correcto para envío a DOT: Ninguno
Nombre técnico para DOT: Ninguno
Clase de riesgo para DOT: N.A.
Grupo de empaque: N.A.
Sub-clase de riesgo: N.A.
Número UN/NA para DOT: Ninguno

Sección 15 - Información reglamentaria

Categoría de riesgo CERCLA - SARA:

Este producto ha sido revisado según las categorías de riesgo de EPA promulgadas según las secciones 311 y 312 de la Ley de enmienda y reautorización de fondos especiales de 1986 (SARA, por sus iniciales en inglés, Título III) y se considera, según las definiciones correspondientes, que cumple con las siguientes categorías:

PELIGRO DE SALUD INMEDIATO, PELIGRO DE SALUD CRONICO

Sección 313 de la ley SARA:

Este producto contiene las siguientes substancias sujeto a los requisitos de reporte de la sección 313 del título III de la ley SARA de 1986 y 40 CFR parte 372:

Ninguno

Ley para el control de substancias tóxicas:

Todos ingredientes en este producto son o en lista de inventario de TSCA, o de otro modo exime.

Este producto contiene las siguientes substancias químicas de acuerdo con los requisitos de reporte de la ley TSCA 12(B) si es exportado desde los Estados Unidos:

Ninguno

Regulaciones estatales de EE.UU.:

Ley del Derecho a saberde New Jersey:

Los siguientes materiales no representan peligro, pero están entre los primeros cinco componentes de este producto:

Nombre Químico	Número CAS
Non-Hazardous Polymer	Proprietary
Water	7732-18-5
Non-Hazardous Plasticizer	Proprietary

Ley del Derecho a saber de Pennsylvania:

Los siguientes ingredientes no peligrosos están presentes en el producto en una proporción mayor a 3%:

Nombre Químico	Número CAS
Non-Hazardous Polymer	Proprietary
Water	7732-18-5
Non-Hazardous Plasticizer	Proprietary

Propuesta 65 de California:

Advertencia: Los siguientes ingredientes presentes en el producto son conocidos para el Estado de California por causar cáncer:

Nombre Químico	Número CAS	Definición	Fecha Listó
Aldehídoacético	75-07-0	Carcinogenic.	Listed: April 1, 1988

Advertencia: Los siguientes ingredientes presentes en el producto son conocidos para el Estado de California por causar defectos de nacimiento u otros daños reproductivos.

Ninguno

Sección 16 - Otra información

Índices HMIS:

Salud: 1 Inflamabilidad: 1 Reactividad: 0

COMPONENTES ORGÁNICOS VOLÁTILES, GR/LTR: 83.6 LB/GAL: 0.7 WT%: 3.893

RAZÓN DE LA REVISIÓN:

Leyenda: N.A. - No aplica ACGIH - Conferencia Americana de Higienistas Industriales gubernamentales

N.E. - No establecido SARA - Ley Ley de enmienda y reautorización de fondos especiales de 1986 (SARA)

N.D. - No determinado NJRTK - Ley del Derecho a saber de New Jersey

VOC - Componente orgánico volátil

OSHA - Administración de la seguridad y salud ocupacional

PEL - Límites permitidos de exposición

C - Grados centígrados

TLV - Valor del límite umbral

NTP - Programa nacional de toxicología

STEL - Límite de exposición a corto plazo

CEIL - Límite máximo de exposición

LD50 - Dosis letal 50

LC50 - Concentración letal 50

HMIS - Sistema de identificación de materiales peligrosos

MSDS - Hoja de datos de la seguridad de los materiales

CASRN - Número de registro de servicios de abstractos químicos

F - Grados Fahrenheit

DAP cree que los datos y las declaraciones contenidos en el presente son exactos hasta la fecha. Se ofrecen de buena fe como valores típicos y no como las especificaciones del producto. **NO SE OFRECE NINGUNA GARANTÍA DE COMERCIABILIDAD, IDONEIDAD PARA UN PROPÓSITO EN PARTICULAR O CUALQUIER OTRA GARANTÍA, EXPRESA O IMPLÍCITA, CON RESPECTO A LA INFORMACIÓN SUMINISTRADA EN EL PRESENTE O DEL PRODUCTO AL CUAL LA INFORMACIÓN SE REFIERE.** Dado que este documento tiene la intención de ser una guía únicamente para el uso correcto y el manejo preventivo del producto de la referencia por parte de personas correctamente entrenadas, es responsabilidad del usuario (i) revisar las recomendaciones con especial consideración al contexto específico del uso que se pretende y (ii) determinar si son correctas.

<Final de la hoja de datos de la seguridad de los materiales>

Fiche signalétique

24 heures – Numéros de téléphone en cas d'urgence:

Urgence médicale: **1-800-327-3874**
1-513-558-5111

Urgence transport: **1-800-535-5053**
1-352-323-3500

NOTE: Les numéros de téléphone en cas d'urgence doivent être utilisés uniquement lors de déversement, de fuite, d'incendie, d'exposition ou d'accident impliquant des produits chimiques.

IMPORTANT: Lire attentivement cette fiche signalétique avant de manipuler ou de disposer de ce produit. Remettre ces informations aux employés, clients et utilisateurs de ce produit. Ce produit est régit sous la gouverne de l'OSHA, Communication de renseignements à l'égard de matières dangereuses, et ce document a été préparé pour répondre aux exigences de ces standards. Les significations pour toutes les abréviations utilisées dans cette fiche signalétique sont décrites à la Section 16.

Section 1 – Identification du produit et de la compagnie

This MSDS is offered in English upon request.
Los Datos de Serguridad del Producto pueden obtenerse en Espanol si lo riquiere.

Nom du produit:	VOC Compliant Phenoseal Does It All White and Colors	**Date de révision:**	02/03/2006
Numéro UPC:	5113600005, 5113600101, 5113600511, 5113600521, 5113600524, 5113602101, 5113602102, 5113603102, 5113604102, 5113606102, 5113609102, 5113616102, 5113624117, 5113630101, 5113699012, 5113699013, 5113699014, 5113699016	**Date d'abrogation:**	07/13/2004
Utilisation du produit/Classe:	Calfeutrant au latex	**Numéro de fiche:**	00061014001
Fabricant:	**DAP Inc.** **2400 Boston Street Suite 200** **Baltimore, MD 21224-4723** **888-327-8477 (Pour toute information non urgente)**		

Section 2 - Composition / Ingrédients dangereux

Nom Chimique	CASRN	Poids%	ACGIH TWA	ACGIH STEL	ACGIH CEIL	OSHA TWA	OSHA STEL	OSHA CEIL	F
Talc, forme de non-asbestous	14807-96-6	20-25	2 MGM3	N.E.	N.E.	20 mppcf	N.E.	N.E.	N
Monoisobutyrate de triméthyl-2,2,4 pentanediol-1,3	25265-77-4	0.5-1.5	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.	N
Dioxyde de titane	13463-67-7	0.5-1.5	10 MGM3	N.E.	N.E.	15 MGM3	N.E.	N.E.	N
Carbon Black	1333-86-4	0.0-1.5	3.5 MGM3	N.E.	N.E.	3.5 MGM3	N.E.	N.E.	N
Acétate de vinyle	108-05-4	<0.07	10 PPM	15 PPM	N.E.	N.E.	N.E.	N.E.	N
Acétaldéhyde	75-07-0	<0.03	N.E.	N.E.	25 PPM	200 PPM	N.E.	N.E.	N

Notes concernant l'exposition:

CASRN	Notes concernant l'exposition
14807-96-6	Le talc (Californies numérotent dans ce produit contient naturellement un tremolite de non-fibreux (Californies numérotent 14567-73-8), serpentine de non-fibreux (Californies numérotent 12135-86-3), et anthophyllite de non-fibreux (Californies numérotent 17068-78-9). Se référer à 29 CFR 1910.1000 Z de Table 3 pour l'exposition acceptable limitent associé avec le talc de non-fibreux et ces arrivant naturellement des constituants accessoires.

Important: Les limites d'exposition permises (LEP) décrites proviennent du Department of Labor des États-Unis, règlement final concernant les

valeurs d'exposition moyennes pondérées de l'OSHA
(CFR 29 1910.1000); ces limites peuvent varier selon les états.

Note: Prendre tous les moyens selon les circonstances afin de prévenir ou réduire toute exposition de la peau des employés aux substances portant la mention «OUI» dans la colonne «PEAU» du tableau ci-dessus. Utiliser des gants, une combinaison, des lunettes étanches, tout autre équipement de protection personnel adéquat, les contrôles techniques et les pratiques appropriées au type de travail.

Section 3 – Identification des dangers

Urgences générales: Une pâte blanche, de-blanc ou colorée avec une odeur de dissolvant insignifiante. AVERTISSEMENT ! Nocif si avalé ou absorbé par la peau. Peut causer une irritation des yeux, de la peau, du nez, de la gorge et des voies respiratoires.

Consulter les autres sections de cette fiche signalétique pour des informations plus détaillées.

Effets de surexposition – Contact oculaire: Peut causer une irritation des yeux.

Effets de surexposition – Contact cutané: Peut causer une irritation de la peau. Nocif en cas d'absorption par la peau. Un contact excessif et répété avec la peau peut causer une irritation.

Effets de surexposition – Inhalation: Nocif en cas d'ingestion L'inhalation d'hautes concentrations de vapeur peut provoquer une depression du Système Nerveux Central et une narcosis. L'inhalation de ce produit peut provoquer l'irritation des voies respiratoires (nez, bouche, muqueuses).

Effets de surexposition – Ingestion: Nocif si ingéré.

Effets de surexposition – Dangers chroniques: Un contact excessif et répété avec la peau peut causer une irritation et possiblement une dermatite. Une exposition excessive et répétée peut causer des lésions au système respiratoire. Une exposition excessive peut causer des lésions aux reins, au système cardiovasculaire, à la peau et au foie.

Ce produit contient l'acétate de vinyle qui est classifié comme une classe 2B substance cancérogène par IARC. L'acétate de vinyle a été trouvée pour causer le cancer dans l'étendue respiratoire d'animaux de laboratoire. Il n'y a pas de preuve que l'acétate de vinyle cause le cancer dans humain. Le IARC a publié un monograph sur l'acétate de vinyle (1995). Dans ce monograph, IARC indique "il y a de la preuve inadéquate dans humain pour carcinogenicity d'acétate de vinyle. Est là-bas limité de la preuve dans les animaux expérimentaux pour le carcinogenicity d'acétate." de vinyle Normalement, ce manque de preuve concluante placerait une substance dans le IARC 3 classification (n'a pas classifié comme une substance cancérogène humaine). Cependant, parce que l'acétate de vinyle est metabolized à acetaldehyde, qui a un IARC 2B (probablement cancérogène à humain) la classification, il a été aussi énuméré sous la Catégorie 2B.

Voie(s) d'absorption: Le Contact de peau, l'Absorption de Peau, l'Inhalation, le Contact d'Oeil

Problèmes médicaux aggravés lors d'exposition au produit : Aucune connue.

Section 4 – Premiers soins

Premiers soins – Contact oculaire: En cas de contact avec les yeux, rincer abondamment avec de l'eau pendant au moins 15 minutes ou jusqu'à ce que l'irritation disparaisse. Obtenir des soins médicaux immédiatement.

Premiers soins – Contact cutané: Laver immédiatement et abondamment avec de l'eau et du savon. Enlever et laver les vêtements contaminés.

Premiers soins – Inhalation: En cas d'inhalation, transporter la personne exposée à l'air frais. Si elle a de la

difficulté à respirer, quitter les lieux afin d'obtenir de l'air frais. Si la difficulté à respirer persiste, obtenir des soins médicaux immédiatement.

Premiers soins – Ingestion: En cas d'ingestion, NE PAS FAIRE VOMIR. Obtenir des soins médicaux immédiatement.

Note au médecin: Aucune Information.

COMMENTAIRES: En cas d'apparition d'une irritation ou de complications suite à une exposition au produit, communiquer immédiatement avec l'urgence médicale au 1-800-327-3874.

Section 5 – Mesures de protection en cas d'incendie

Point d'éclair, ° F (° C): Plus grand que 200 degrés Fahrenheit
Méthode: (Seta Closed Cup)

Limite d'explosibilité inférieure, %: Pas Etabli

Limite d'explosibilité supérieure, %: Pas Etabli

Moyens d'extinction: Le Dioxyde de carbone, Sécher Chimique, la Mousse, le Brouillard d'Eau

Risques particuliers d'explosions ou d'ignition: Pas de mesures spéciales de protection requises pour la lutte contre le feu.

Procédures spéciales de lutte contre les incendies: Porter un respirateur autonome à pression d'air (approuvé NIOSH ou équivalent) et un équipement de protection personnel complet. Utiliser une lance-brouillard afin de refroidir les contenants exposés.

Section 6 – Mesures en cas de déversement accidentel

Procédures de nettoyage: Porter un équipement de protection personnel approprié tel que spécifié à la Section 8. Utiliser un matériau absorbant ou gratter le matériau sec puis le déposer dans un contenant.

Section 7 – Manutention et entreposage

Manutention: TENIR HORS DE LA PORTÉE DES ENFANTS! NE PAS AVALER. Utiliser seulement si la ventilation est adéquate. Évitez de respirer les vapeurs et ne laissez pas le produit venir en contact avec les yeux, la peau ou les vêtements. Laver vigoureusement après la manipulation. Ouvrir toutes les fenêtres et les portes ou utiliser tout autre moyen afin d'assurer une ventilation en croisé et l'entrée d'air frais durant l'application et le temps de séchage. L'odeur n'est pas un critère valable pour déterminer les conditions de danger.

Entreposage: Refermer les contenants après usage. Entreposer les contenants loin de la chaleur excessive ou du froid excessif. Ne pas entreposer à des températures supérieures à 120° F (48,8° C). Entreposer loin des produits caustiques et des agents oxydants.

Section 8 – Contrôles d'exposition / Protection personnelle

Mesures de précaution: Aucune Information.

Contrôles d'ingénierie: Une bonne ventilation centrale devrait suffire pour contrôler les niveaux de matières en suspension. Assurer une ventilation adéquate, surtout dans les endroits clos. Une ventilation locale près de la source d'émission peut être nécessaire pour maintenir la concentration ambiante au-dessous des niveaux limites recommandés.

Protection des voies respiratoires: En cas de ventilation insuffisante, porter un appareil respiratoire approprié. Dans certaines circonstances, lorsque le niveau anticipé de concentrations en suspension est supérieur aux limites d'exposition permises, il est nécessaire de porter un respirateur purificateur d'air muni d'une cartouche ou d'un filtre à cartouche anti-vapeurs organiques. Un programme de protection respiratoire défini selon les normes de l'OSHA 1910.134 et de l'ANSI Z88.2 doit être appliqué à chaque fois que les conditions sur les lieux de travail exigent de porter un respirateur.

Protection de la peau: gants en caoutchouc

Protection des yeux: Lunettes étanches ou lunettes de sécurité avec boucliers latéraux.

Équipements de protection additionnels: inutile dans les conditions normales d'utilisation.

Pratiques hygiéniques: Se laver les mains avant les pauses et à la fin de la journée. Enlever et laver les vêtements contaminés avant réutilisation.

Section 9 – Propriétés physiques et chimiques

Point d'ébullition:	Pas Etabli	**Densité de vapeur:**	Plus lourd Que l'Air
Odeur:	Dissolvant insignifiant	**Limite de détection olfactive:**	Pas Etabli
Apparence:	Une pâte blanche, de-blanc ou colorée.	**Taux d'évaporation:**	Acétate plus lent Que de n-Butyl
Solubilité dans l'eau (H_2O):	Pas Etabli	**Poids spécifique:**	1.285
Point de congélation:	Pas Etabli	**Taux de pH:**	Entre 7.0 et 12.0
Pression de vapeur:	Pas Etabli	**Viscosité:**	Pas Etabli
État physique:	Paste		

(Consulter la Section 16 pour connaître la signification des abréviations))

Section 10 – Stabilité et réactivité

Conditions à éviter: Chaleur excessive ou froid excessif.

Incompatibilité: Incompatible avec les bases fortes et les oxydants.

Produits de décomposition dangereux: Produits de décomposition habituels : oxydes de carbone (COx) et oxydes d'azote (NOx).

Risque de polymérisation: Aucune polymérisation dangereuse ne surviendra dans des conditions normales d'utilisation.

Stabilité: Stable dans les conditions recommandées de stockage.

Section 11 – Propriétés toxicologiques

Produit DL50: Pas Etabli **Produit CL50:** Pas Etabli

CASRN	Nom Chimique	LD50	LC50
108-05-4	Acétate de vinyle	----------	Rat:11400 mg/m3/4H
75-07-0	Acétaldéhyde	----------	Rat:13300 ppm/4H

Effets cancérigènes:

Numéro CAS	Nom Chimique	ACGIH	OSHA	IARC	NTP
13463-67-7	Dioxyde de titane	-----	-----	La classification pas possible des données actuelles.	-----
108-05-4	Acétate de vinyle	La substance cancérogène animale confirmée avec le pertinence inconnu aux humains.	-----	Substance cancérogène possible.	-----
75-07-0	Acétaldéhyde	La substance cancérogène animale confirmée avec le pertinence inconnu aux humains.	-----	Substance cancérogène possible.	Substance cancérogène prévue.

Données significatives possiblement pertinentes à l'humain: Aucun

Section 12 – Information écologique

Information écologique: Aucune dégradation de l'environnement n'est connue ou prévisible dans les conditions normales d'utilisation.

Section 13 – Information sur la mise au rebut

Information concernant la mise au rebut: Disposer de ce matériau en respectant les lois fédérales, provinciales et municipales. Les lois et restrictions provinciales et municipales sont complexes et peuvent différer des lois fédérales. La responsabilité de la disposition appropriée des déchets appartient au propriétaire des déchets.

Code de mise au rebut de l'Agence de protection de l'environnement (40 CFR Section 261): Aucun

Section 14 – Étiquetage selon le Ministère des Transports

Nom du produit expédié: Aucun
Nom technique: Aucun
Classe de danger: N.A.
Groupe d'emballage: N.A.
Classe de transport: N.A.
Numéro UN/NA: Aucun

Section 15 – Information sur les règlements

CERCLA - Catégories de dangers selon le SARA:

Ce produit a été revu en conformité avec les «Catégories de dangers» établies par l'Agence de protection de l'environnement et promulguées aux Sections 311 et 312 du Superfund Amendment and Reauthorization Act de 1986 (SARA Titre III). Selon les définitions applicables, il est considéré répondre aux catégories suivantes :

RISQUE DE SANTE IMMEDIAT, RISQUE DE SANTE CHRONIQUE

SARA SECTION 313 :
Ce produit contient les substances suivantes assujetties aux normes de déclaration de la Section 313, du Titre III de la Superfund Amendments and Reauthorization Act de 1986 et du 40 CFR partie 372 :

Aucun

LOI SUR LE CONTRÔLE DES SUBSTANCES TOXIQUES:

Tous ingrédients dans ce produit sont ou sur la liste d'inventaire de TSCA, ou autrement exempter.
Ce produit contient les substances chimiques suivantes à déclarer selon les normes TSCA 12(B) si exporté à l'extérieur des États-Unis:

Aucun

Lois particulières selon les états aux États-Unis:

NEW JERSEY RIGHT-TO-KNOW :

Les substances suivantes sont non-dangereuses mais sont comptées parmi les 5 principaux ingrédients composant ce produit:

Nom Chimique	Numéro CAS
Non-Hazardous Polymer	Proprietary
Water	7732-18-5
Non-Hazardous Plasticizer	Proprietary

PENSYLVANIA RIGHT-TO-KNOW:

Les substances suivantes sont non-dangereuses mais sont présentes à plus de 3% dans ce produit:

Nom Chimique	Numéro CAS
Non-Hazardous Polymer	Proprietary
Water	7732-18-5
Non-Hazardous Plasticizer	Proprietary

PROPOSITION 65 DE CALIFORNIE:

AVERTISSEMENT ! Les produits chimiques listés ci-dessous et contenus dans ce produit sont reconnus par l'État de la Californie pour causer le cancer:

Nom Chimique	Numéro CAS	Définition	Dater Enuméré
Acétaldéhyde	75-07-0	Carcinogenic.	Listed: April 1, 1988

AVERTISSEMENT ! Les produits chimiques listés ci-dessous et contenus dans ce produit sont reconnus par l'État de la Californie pour causer le cancer, des anomalies congénitales ou d'autres problèmes reliés à la reproduction:

Aucun

Section 16 – Autres informations

Classification des dangers:

Santé: 1 Inflammabilité: 1 Réactivité: 0

COMPOSÉ ORGANIQUE VOLATIL, G/LITRE: 83.6 LB/GALLON: 0.7 POIDS %: 3.893

RAISONS DE RÉVISION:

Légende: N.A. – Non applicable

N.É. – Non établi

N.D. – Non déterminé

VOC – Composé organique volatil

PEL – Limite d'exposition permise

TLV – Limite tolérable d'exposition

NTP – National Toxicology Program

STEL – Limite d'exposition à court terme

LD50 – Dose létale 50

ACGIH – American Conference of Governmental Industrial Hygienists

SARA – Superfund Amendments and Reauthorization Act de 1986

NJRTK – New Jersey Right-to-Know Law

OSHA – Occupational Safety and Health Administration

HMIS – Hazardous Materials Identification System

TWA – Valeur d'exposition moyenne pondérée

F – Degré Fahrenheit

C – Degré Celcius

LC50 – Concentration létale 50

CASRN – Numéro enregistré selon le Chemical Abstracts Service

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

DAP croit que les données et renseignements stipulés dans cette fiche signalétique sont précis à la date de rédaction de cette fiche. Ces données sont offertes en toute bonne foi et représente des valeurs standard sans toutefois être des spécifications du produit. **AUCUNE GARANTIE SUR LA QUALITÉ MARCHANDE, GARANTIE D'APTITUDE POUR AUCUN TYPE D'EMPLOI PARTICULIER OU TOUTE AUTRE FORME DE GARANTIE N'EST EXPRESSÉMENT OU IMPLICITEMENT OFFERTE EN REGARD DES INFORMATIONS FOURNIES DANS CETTE FICHE OU DES INFORMATIONS RELATIVES AU PRODUIT.** Cette fiche est produite uniquement à titre de guide pour les personnes formées à cet effet afin qu'elles puissent appliquer les procédures appropriées de manutention auxquelles le produit réfère. Toutefois, c'est la responsabilité chaque utilisateur de revoir les recommandations selon le contexte spécifique de l'utilisation prévue et de déterminer si ces procédures sont appropriées.

<Fin de la fiche signalétique>

GLOUCESTER -- PHENOSEAL VINYL ADHESIVE CAULK 100 SERIES
MATERIAL SAFETY DATA SHEET
NSN: 803000N026899
Manufacturer's CAGE: GLOUC
Part No. Indicator: B
Part Number/Trade Name: PHENOSEAL VINYL ADHESIVE CAULK 100 SERIES

==========

General Information

==========

Company's Name: GLOUCESTER CO INC
Company's Street: 235 COTTAGE ST
Company's P. O. Box: 428
Company's City: FRANKLIN
Company's State: MA
Company's Country: US
Company's Zip Code: 02038
Company's Emerg Ph #: 508-528-2200; 800-343-4963
Company's Info Ph #: 508-528-2200; 800-343-4963
Record No. For Safety Entry: 002
Tot Safety Entries This Stk#: 002
Status: SMJ
Date MSDS Prepared: 25FEB93
Safety Data Review Date: 15FEB96
MSDS Serial Number: CBBPV

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Ingredients/Identity Information

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Proprietary: NO
Ingredient: NON-HAZARDOUS INGREDIENTS
Ingredient Sequence Number: 01
NIOSH (RTECS) Number: 1000314NH
OSHA PEL: N/K (FP N)
ACGIH TLV: N/K (FP N)

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Physical/Chemical Characteristics

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Appearance And Odor: MILKY (OR COLORED) AQUEOUS LATEX PASTE, WITH MILD ODOR
Boiling Point: SUP DAT
Melting Point: 32.0F,0.0C
Vapor Pressure (MM Hg/70 F): =WATER
Vapor Density (Air=1): >1
Specific Gravity: 1.1-1.3(H*2O=1)
Evaporation Rate And Ref: <1 (BUTYL ACETATE=1)
Solubility In Water: SOLUBLE

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Fire and Explosion Hazard Data

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Flash Point: N/A
Lower Explosive Limit: N/A
Upper Explosive Limit: N/A
Extinguishing Media: DRY FILM CAN BURN. USE ANY AVAILABLE EXTINGUISHING MATERIAL.
Special Fire Fighting Proc: WEAR NIOSH/MSHA APPROVED SCBA & FULL PROTECTIVE EQUIPMENT (FP N).
Unusual Fire And Expl Hazrds: NONE.

==========

Reactivity Data

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Stability: YES
Cond To Avoid (Stability): AVOID TEMPERATURES ABOVE 150F.
Materials To Avoid: NONE KNOWN (THIS PRODUCT CONTAINS WATER).
Hazardous Decomp Products: NONE SPECIFIED BY MANUFACTURER.
Hazardous Poly Occur: NO
Conditions To Avoid (Poly): NOT RELEVANT.

Health Hazard Data

LD50-LC50 Mixture: NONE SPECIFIED BY MANUFACTURER.
Route Of Entry - Inhalation: NO
Route Of Entry - Skin: NO
Route Of Entry - Ingestion: NO
Health Haz Acute And Chronic: ACUTE: TEMPORARY IRRITATION (REDNESS) OF SKIN. CHRONIC: NONE SPECIFIED BY MANUFACTURER.
Carcinogenicity - NTP: NO
Carcinogenicity - IARC: NO
Carcinogenicity - OSHA: NO
Explanation Carcinogenicity: NOT RELEVANT.
Signs/Symptoms Of Overexp: SEE HEALTH HAZARDS.
Med Cond Aggravated By Exp: NONE KNOWN.
Emergency/First Aid Proc: INGESTION: DILUTE BY GIVING 2 GLASSES OF WATER. CONSULT MD. EYES: FLUSH WITH WATER FOR AT LEAST 15 MINUTES. SKIN: WASH WITH SOAP AND WATER. INHALATION: REMOVE TO FRESH AIR. SUPPORT BREATHING (GIVE OXYGEN OR ARTIFICIAL RESPIRATION (FP N).

Precautions for Safe Handling and Use

Steps If Matl Released/Spill: SCOOP INTO SUITABLE CONTAINER FOR USE OR DISPOSAL. CLEAN UP WITH WATER.
Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.
Waste Disposal Method: DISPOSE OF IN ACCORDANCE W/LOCAL, STATE & FEDERAL REGULATIONS.
Precautions-Handling/Storing: KEEP FROM FREEZING. AVOID TEMPERATURES ABOVE 150F. PRODUCT STABILITY MAY BE AFFECTED.
Other Precautions: KEEP CONTAINER CLOSED TO AVOID "SKINNING".

Control Measures

Respiratory Protection: NONE. USE NIOSH/MSHA APPROVED RESPIRATOR APPROPRIATE FOR EXPOSURE OF CONCERN (FP N).
Ventilation: MECHANICAL (GENERAL): ROOM VENTILATION USUALLY ADEQUATE.
Protective Gloves: IMPERVIOUS GLOVES.
Eye Protection: ANSI APPRVD CHEM WORKERS GOGGS (FP N).
Other Protective Equipment: NONE NORMALLY REQUIRED. EMERGENCY EYEWASH & DELUGE SHOWER MEETING ANSI DESIGN CRITERIA (FP N).
Work Hygienic Practices: WASH HANDS AND FACE BEFORE SMOKING OR EATING.
Suppl. Safety & Health Data: BP: WILL SPLATTER. >212F, >100C.

Transportation Data

Disposal Data

Label Data

Label Required: YES
Technical Review Date: 15FEB96
Label Date: 15FEB96

Label Status: G
Common Name: PHENOSEAL VINYL ADHESIVE CAULK 100 SERIES
Chronic Hazard: NO
Signal Word: CAUTION!
Acute Health Hazard-None: X
Contact Hazard-Slight: X
Fire Hazard-None: X
Reactivity Hazard-None: X
Special Hazard Precautions: MAY BE A SKIN IRRITANT. ACUTE: TEMPORARY IRRITATION (REDNESS) OF SKIN. CHRONIC: NONE SPECIFIED BY MANUFACTURER.
Protect Eye: Y
Protect Skin: Y
Protect Respiratory: Y
Label Name: GLOUCESTER CO INC
Label Street: 235 COTTAGE ST
Label P.O. Box: 428
Label City: FRANKLIN
Label State: MA
Label Zip Code: 02038
Label Country: US
Label Emergency Number: 508-528-2200; 800-343-4963

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 595.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Phenyl Salicylate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

Hazard class: Specific target organ toxicity, single exposure; respiratory tract irritation (Category 3). May cause respiratory irritation (H335). Avoid breathing dust or fumes (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Phenyl Salicylate	118-55-8	2-HOC_6H_4-1-$COOC_6H_5$	214.22	
Synonym: Salol				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water (P302+P352). **If skin irritation occurs:** Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Class IIIA combustible solid.
Flash point: 71 ^{o}C
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #3. Store with hydrocarbons, oils, esters and aldehydes.
Light sensitive. Store in a cool dry place away from light. Keep container tightly closed (P233). Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White, crystalline powder. Faint aromatic odor.
Soluble: Many organic solvents. Slightly in water.

Boiling point: 173 ^{o}C
Melting point: 43 ^{o}C
Specific gravity: 1.2614

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant, possible sensitizer
Chronic effects: Possible teratogen
Target organs: N.A.

ORL-RAT LD_{50}: 3 g/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #18b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (204-259-2).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 600.00

Revision Date: March 25, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

o-Phosphoric Acid

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 4). Harmful if swallowed (H302). Do not eat, drink or smoke when using this product (P270).

Hazard class: Skin corrosion or irritation (Category 1). Causes severe skin burns and eye damage (H314).

Hazard class: Acute toxicity, inhalation (Category 1). Fatal if inhaled (H330).

Industrial exposure to phosphoric acid vapors and mists is listed as a known human carcinogen by IARC (IARC-1).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
o-Phosphoric acid Synonym: Orthophosphoric acid	7664-38-2	H_3PO_4	98.00	

SECTION 4 — FIRST AID MEASURES

Immediately call a POISON CENTER or physician (P310).
If inhaled: Remove victim to fresh air in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If on skin:** Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353). Wash contaminated clothing before reuse (P363).
If swallowed: Rinse mouth. Do NOT induce vomiting (P301+P330+P331).

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable liquid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
H-3
F-0
R-0

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all ignition sources and ventilate area. Contain spill with sand or other inert absorbent material, neutralize with sodium bicarbonate or calcium hydroxide and deposit in sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #9. Store with acids, except nitric acid.
Store in a dedicated acid cabinet and away from any source of water; if an acid cabinet is not available, store in Flinn Saf-Cube™.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).
Exposure guidelines: PEL/TLV 1 mg/m^3(OSHA/ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless viscous liquid. Odorless.
Soluble: Water and alcohol

Boiling point: ~135 ^oC
pH: <1 (1% solution)
Specific gravity: 1.58
Vapor pressure: 2.2 mmHg

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers, reducers, bases, and metals. Forms a detonable mixture with nitromethane.
Shelf life: Good, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Harmful liquid, corrosive
Chronic effects: respiratory tract irritation
Target organs: N.A.

ORL-RAT LD_{50}: 1530 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: 2740 mg/kg

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Harmful to aquatic life at low concentrations. Toxicity is primarily associated with pH.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #24b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Phosphoric Acid. Hazard class: 8, Corrosive. UN number: UN1805.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-633-2), RCRA code D002.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 25, 2014

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MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 0 Flammability = 0 Reactivity = 0
HMIS RATING: Health = 0 Flammability = 0 Physical Hazard = 0

SECTION I – IDENTITY AND MANUFACTURER'S INFORMATION (11TDM01140A)

Manufacturer's Name: HILLYARD INDUSTRIES
Address: 302 North Fourth Street
St. Joseph, MO 64501
Product Name: **PINK LOTION HAND SOAP**
Date Prepared: January 29, 2013 (version 1)
Prepared by: Regulatory Affairs Department
Emergency Telephone No.: (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)
Other information calls: (816) 233-1321 (Ext. 8285)
http://www.hillyard.com

*SECTION II – INGREDIENTS/IDENTITY INFORMATION

Components

(Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Water	7732-18-5	None	None	N/A	--
Sodium Lauryl Sulfate	151-21-3	None	None	N/A	--
*Cocamidopropyl Betaine	61789-40-4	N/E	N/E	N/A	---

*SECTION III – PHYSICAL / CHEMICAL CHARACTERISTICS

***Boiling Point:** corrected 211ºF
***Specific Gravity (H_2O = 1):** 25°C = 1.03
***Density** = 8.60lb/gal
***Vapor Pressure (mm Hg.):** 17.54
Percent Volatile by Weight (%): 91 – 92%
Vapor Density (AIR = 1): 0.62
Evaporation Rate (ethyl ether = 1): less than 1
Solubility in Water : complete
Appearance and Odor: Opaque, slightly viscous pink liquid, almond odor
pH = 7 – 8

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

Flash point: > 200°F (TCC)
Flammable Limits: LEL = N/A UEL = N/A
Extinguishing Media: Water
Special Fire Fighting Procedures: None
Unusual Fire and Explosion Hazards: None known by manufacturer.

SECTION V – PHYSICAL HAZARDS

Stability: Stable
Conditions to Avoid: N/A
Incompatibility (Materials to Avoid): None of which we have knowledge
Hazardous Decomposition Products or Byproducts: None
Hazardous Polymerization: Will not occur
Conditions to Avoid: N/A

SECTION VI – HEALTH HAZARD DATA

Routes of entry: Inhalation? No Skin? No Ingestion? No

HEALTH HAZARDS (1. Acute and 2. Chronic)

1. According to Eye Irritation Test (FHSA), product concentrate is a minimal ocular irritant. According to Primary Skin Irritation Test (FHSA), product concentrate is a non-irritant; prolonged and repeated overexposure without water rinse may cause skin irritation. No laboratory animals were involved in the testing of this product.
2. None known by Hillyard Industries.

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No **I.A.R.C. Monographs =** No **OSHA =** No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater than or equal to 0.1%.

SECTION VI – HEALTH HAZARD DATA cont.
Signs and Symptoms of Exposure: N/A
Medical Conditions Generally Aggravated by Exposure: None known
Emergency and First Aid Procedures: Eye and skin contact with concentrate: Flush eyes with plenty of water for 15 minutes; remove contact lenses and flush eyes again with water. If irritation persists, call physician. Flush skin with water. If swallowed, give water; may cause diarrhea; call physician.

SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE
Steps To Be Taken In Case Material Is Released Or Spilled: Rinse area with water and pick up with wet vac or mop.
Waste Disposal Method: Normal sewage disposal
Precautions To Be Taken In Handling And Storing: N/A
Other Precautions: This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR part 372.

SECTION VIII – CONTROL MEASURES
Respiratory Protection (Specify Type): N/A
Ventilation:
Local Exhaust = N/A **Mechanical (General) =** N/A **Special =** N/A **Other =** N/A
Protective Gloves: N/A **Eye Protection:** N/A
Other Protective Clothing or Equipment: Not needed
Work / Hygienic Practices: Rinse cleaner off skin with water.

SECTION IX – TRANSPORTATION INFORMATION
Applicable Regulations: DOT = No; **IMCO =** No; **IATA =** No.
Proper shipping name: Cleaning compound
UN NO.: not applicable **Limited Qty.:** not applicable **Hazard Class:** not applicable
Labels required: not required **DOT Exception:** not applicable
EPA Hazardous waste number/code: not listed
Hazardous waste characteristics: none known
Ignitability = not applicable; **Corrosivity =** not applicable; **Reactivity =** not applicable

DISCLAIMER OF WARRANTIES

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.
The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate.
THE BUYER OR USER ASSUMES ALL RISKS ASSOCIATED WITH THE USE, MISUSE OR DISPOSAL OF THIS PRODUCT. THE BUYER OR USER IS RESPONSIBLE TO COMPLY WITH ALL FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING THE USE, MISUSE OR DISPOSAL OF THESE PRODUCTS.

Version 2, * Denotes revisions since last published MSDS. Supersedes Version New February 4, 2011

Material Safety Data Sheet

PINK RIBBON

STARCO CHEMICAL
A Division of Diamond Chemical Co., Inc.
Union Avenue & DuBois Street
East Rutherford, NJ 07073

DATE PREPARED: 12/13/07
REVISION NUMBER: NEW
EMERGENCY #: 1-800-535-5053 - INFOTRAC
PRODUCT NUMBER: 14217
SUPPLIERS PHONE #: 201-935-4300

SECTION I - IDENTIFICATION

PRODUCT NAME: ..... PINK RIBBON
APPLICATION: ..... POT & PAN DETERGENT

SECTION II - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENT	CAS NUMBER	PEL
NONE PER 29 CFR 1910.1200		

SECTION III - PHYSICAL DATA

APPEARANCE: ..... CLEAR, PINK LIQUID/LEMON ODOR.
BOILING POINT: ..... 212 DEGREES F
VAPOR PRESSURE: ..... NA
VAPOR DENSITY (AIR=1): ..... NA
EVAPORATION RATE: ..... NA
SPECIFIC GRAVITY: 1.019
FLAMMABLE LIMITS: ..... NONE
SOLUBILITY IN WATER: ..... COMPLETE
VOLATILITY INCLUDING WATER: ..... NA

SECTION IV - FIRE AND EXPLOSION DATA

FLASHPOINT: ..... NA
EXTINGUISHING MEDIA: ..... NOT FLAMMABLE
UPPER FLAMMABLE LIMIT (% BY VOL): ..... NA
LOWER FLAMMABLE LIMIT (% BY VOL): ..... NA
AUTO-IGNITION TEMPERATURE: ..... NONE
SPECIAL FIRE FIGHTING PROCEDURES: ..... NONE
UNUSUAL FIRE AND EXPLOSION HAZARDS: ..... NONE

Material Safety Data Sheet

PINK RIBBON

SECTION V - REACTIVITY DATA

STABILITY CONDITIONS TO AVOID: ..... NONE
HAZARDOUS POLYMERIZATION:..... WILL NOT OCCUR
HAZARDOUS DECOMPOSITION PRODUCTS: ..... OXIDES OF CARBON
INCOMPATIBILITY: ..... NONE KNOWN
REACTIVITY IN WATER: ..... NONE
CONDITIONS TO AVOID: ..... NONE

SECTION VI - HEALTH DATA

THRESHOLD LIMIT VALUE: ..... NONE
OSHA: ..... NO
OSHA PEL:..... NONE SET
LISTED CARCINOGEN: ..... NO
MEDICAL CONDITION AGGRAVATED BY EXP: NONE KNOWN
CHRONIC OVER EXPOSURE EFFECTS: ..... NONE KNOWN
IARC MONOGRAPHS: ..... NO
NATIONAL TOXICOLOGY PROGRAM: ..... NO
EYES: ..... SPLASH PROOF GOGGLES
SKIN (DERMAL): ..... NONE UNDER NORMAL USE

SECTION VII FIRST AID

BREATHING (INHALATION): ..... REMOVE TO FRESH AIR. CALL PHYSICIAN.
SWALLOWING (INGESTION): ..... DRINK LARGE AMOUNTS OF WATER. DO NOT INDUCE VOMITING. CALL PHYSICIAN.
EYES: ..... FLUSH WITH WATER FOR 15 MINS. CALL A PHYSICIAN.
SKIN (DERMAL):..... WASH WITH WATER.
NOTE TO PHYSICIAN: ..... NONE

SECTION VIII EMPLOYEE PROTECTION

RESPIRATORY PROTECTION:..... NONE NEEDED IN NORMAL USE
LOCAL EXHAUST: ..... ADEQUATE
MECHANICAL EXHAUST: ..... NONE
SPECIAL: ..... NONE
OTHERS: ..... NONE
PROTECTIVE CLOTHING: ..... NONE NEEDED IN NORMAL USAGE.
EYE PROTECTION: ..... SPLASH PROOF GOGGLES
PROTECTIVE GLOVES: ..... NONE NEEDED UNDER NORMAL USE.

Material Safety Data Sheet

PINK RIBBON

SECTION IX - SPILL AND DISPOSAL DATA

SPILL: SMALL SPILLS FLUSH TO SEWER.

WASTE DISPOSAL: OBSERVE ALL FEDERAL, STATE AND LOCAL REGULATIONS REGARDING DISPOSAL.

OTHER PRECAUTIONS: NONE

SECTION X - OTHER REGULATORY INFORMATION

HMIS HEALTH: 0
HMIS FLAMMABILITY: 0
HMIS REACTIVITY: 0
HMIS OTHER:..... M

SECTION XI - PRECAUTIONARY LABEL STATEMENTS

WARNING: NONE

SECTION XII - ADDTIONAL INFORMATION

ADDITIONAL: NONE

MATERIAL SAFETY DATA SHEET

ABBREVIATIONS:
NA = NOT APPLICABLE
ND = NOT DETERMINED
NE = NOT ESTABLISHED

HEALTH = 1
FLAMMABILITY = 0
REACTIVITY = 0
PERSONAL PROTECTION = B

SECTION 1 - PRODUCT IDENTIFICATION

PRODUCT NAME: Brite-Stripe Athletic Field Marking Paint - Colors

PRODUCT TYPE: Latex Paint

PIONEER MANUFACTURING COMPANY
4529 INDUSTRIAL PARKWAY
CLEVELAND, OHIO 44135
TELEPHONE: (216) 671-5500

EMERGENCY TELEPHONE: (800) 535-5053
INFOTRAC

DATE PREPARED: 7/30/97
PREPARED BY: RMP
D.O.T. SHIPPING NAME: Not Regulated

SECTION 2 - HAZARDOUS INGREDIENTS

CHEMICAL NAME:	CAS NO.	OSHA PEL	ACGIH TLV	% WT
Monoethanol Amine	141-43-5	3 ppm	6 ppm	
Acrylic Latex	N/A	N.E.	N.E.	
Water	7732-18-5	N.E.	N.E.	
Calcium Carbonate	1317-65-3	5 mg/m3 Respirable Dust		

5401

* SUBJECT TO REPORTING REQUIREMENTS OF SARA TITLE III SECTION 313, 40 CFR 372

SECTION 3 - PHYSICAL DATA

BOILING POINT (° F): 212
VAPOR PRESSURE: Equal to water
VAPOR DENSITY: Equal to water
SOLUBILITY IN WATER: Soluble
APPEARANCE/ODOR: Color as indicated, viscous liquid, mild latex odor

SPECIFIC GRAVITY: 1.35
MELTING POINT: N.A.
EVAPORATION RATE (BUAC=1): Equal to water
pH: 9-10

SECTION 4 - FIRE AND EXPLOSION DATA

FLASH POINT (METHOD USED): None, SETA

FLAMMABILITY LIMITS: LEL - N.A. UEL - N.A.

EXTINGUISHING MEDIA: Water, Foam, Carbon Dioxide, Dry Chemical.

SPECIAL FIRE FIGHTING PROCEDURES: None

UNUSUAL FIRE FIGHTING AND EXPLOSION HAZARDS: Closed containers may explode due to steam formation from exposure to high heat. Use water spray to cool.

FOR CHEMICAL EMERGENCY
Call INFOTRAC
1-800-535-5053
24 Hrs. per day, 7 days per week

SECTION 5 - REACTIVITY DATA

STABILITY: Stable CONDITIONS TO AVOID: None known
HAZARDOUS POLYMERIZATION: Will not occur
INCOMPATIBILITY: Acids could cause coagulation
HAZARDOUS DECOMPOSITION BYPRODUCTS: None known

SECTION 6 - HEALTH HAZARD DATA

ROUTES OF ENTRY: INHALATION? No SKIN? No INGESTION? No
HEALTH HAZARDS (ACUTE AND CHRONIC): May be irritating to eyes, skin and respiratory tract.

CARCINOGENICITY: NTP? No IARC MONOGRAPHS? No OSHA REGULATED? No

SIGNS AND SYMPTOMS OF EXPOSURE: Redness or irritation of eyes and skin. Irritation or nausea from inhalation or ingestion.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: None known

EMERGENCY AND FIRST AID PROCEDURES: EYE CONTACT: Flush with water for at least 15 minutes, see a physician. SKIN CONTACT: Wash with soap and water. If irritation persists, see a doctor. INHALATION: Remove person to fresh air. INGESTION: Give two glasses of milk or water to dilute. Call a Doctor or Poison Control Center immediately.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IF MATERIAL IS SPILLED OR LEAKED: Eliminate source of spill. Contain spill. Remove free liquid to a secure container. Use absorbent to capture residue. Wash area with soap and water.

WASTE DISPOSAL METHOD: Dispose in accordance with all applicable Local, State and Federal regulations.

PRECAUTIONS TO BE TAKEN IN STORAGE AND HANDLING: Keep containers closed when not in use. Keep from freezing. Avoid prolonged or repeated contact. Clean equipment after use.

SECTION 8 - CONTROL MEASURES

RESPIRATORY PROTECTION: Not normally required. Use outdoors only.
VENTILATION: LOCAL EXHAUST SPECIAL
MECHANICAL OTHER

PROTECTIVE GLOVES: Impervious gloves.
EYE PROTECTION: Chemical goggles.
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: As required to prevent skin contact.

WORK/HYGENIC PRACTICES: Wash with soap and water after using this product.

SAFETY DATA SHEET

FM ANTIBACTERIAL HAND SOAP

FILE NO.: 689
MSDS DATE: 5/30/14

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: FM ANTIBACTERIAL HAND SOAP
PRODUCT CODES: BS1035
MANUFACTURED FOR: BIO-SHINE, INC.
ADDRESS: 190 SUMMERHILL ROAD, SPOTSWOOD, NJ 08884

EMERGENCY PHONE: 513-527-5500 **OTHER CALLS:**
CHEMTREC PHONE: 800-424-9300 **FAX PHONE:** 513-527-5506

PRODUCT USE: GENERAL PURPOSE ANTIBACTERIAL SKIN CLEANSER

SECTION 2: HAZARD(S) IDENTIFICATION

EMERGENCY OVERVIEW: NO MEDICAL CONDITIONS ARE KNOWN TO BE AGGRAVATED BY THIS PRODUCT
ROUTES OF ENTRY: EYES, INGESTION

POTENTIAL HEALTH EFFECTS
- **EYES:** EYE STING OR IRRITATION
- **SKIN:** NONE EXPECTED
- **INGESTION:** NAUSEA
- **INHALATION:** NONE EXPECTED

ACUTE HEALTH HAZARDS: NONE EXPECTED
CHRONIC HEALTH HAZARDS: NONE EXPECTED
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: NONE EXPECTED

CARCINOGENICITY
OSHA: **ACGIH:** **NTP:** **IARC:** **OTHER:**

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:

CAS NO.	% WT	% VOL	SARA 313 REPORTABLE
	ppm	mg/m3	

OSHA PEL-TWA:
OSHA PEL STEL :
OSHA PEL CEILING:

ACGIH TLV-TWA:
ACGIH TLV STEL:
ACGIH TLV CEILING:

SECTION 4: FIRST AID MEASURES

EYES: FLUSH WITH WATER FOR 15 MINUTES, CONSULT PHYSICIAN, DO NOT RUB EYES.
SKIN: FLUSH WITH WATER
INGESTION: VOMITING MAY BE INDUCED, CONSULT PHYSICIAN
INHALATION: NOT EXPECTED

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER: N/A **LOWER:** N/A
(% BY VOLUME)

FLASH POINT: N/A
F: C:
METHOD USED:

AUTOIGNITION TEMPERATURE: N/A
F: C:

NFPA HAZARD CLASSIFICATION
HEALTH: 1 **FLAMMABILITY:** 0 **REACTIVITY:** 0 **OTHER:**

HMIS HAZARD CLASSIFICATION
HEALTH: 1 FLAMMABILITY: 0 REACTIVITY: 0 PROTECTION:

EXTINGUISHING MEDIA: ANY- WILL NOT SUPPORT COMBUSTION
SPECIAL FIRE FIGHTING PROCEDURES: NONE
UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE
HAZARDOUS DECOMPOSITION PRODUCTS: NONE

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: DIKE, THEN SHOVEL INTO LEAKPROOF CONTAINER

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: SPECIAL HANDLING NOT EXPECTED UNDER NORMAL CONDITIONS
OTHER PRECAUTIONS: N/A

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: NONE
VENTILATION : NORMAL
RESPIRATORY PROTECTION: NONE
EYE PROTECTION: SAFETY GLASSES
SKIN PROTECTION: NORMAL CLEANLINESS
OTHER PROTECTIVE CLOTHING OR EQUIPMENT:
WORK HYGIENIC PRACTICES: NORMAL CLEANLINESS
EXPOSURE GUIDELINES: NORMAL INTENDED USE

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: WATER THIN AMBER LIQUID
ODOR: SPICY FLORAL FRAGRANCE
PHYSICAL STATE: LIQUID

pH AS SUPPLIED: 5.6 TYPICAL
BOILING POINT:
F: >200 C: >93
MELTING POINT:
F: N/A C: N/A
FREEZING POINT:
F: NOT DETERMINED C: NOT DETERMINED
VAPOR PRESSURE (mmHg):
@
F: N/A C: N/A
VAPOR DENSITY (AIR = 1): <1
@
F: N/A C: N/A
SPECIFIC GRAVITY (H_2O = 1): 1.00
@
F: 77 C: 25

EVAPORATION RATE: < 1
BASIS (=1):
SOLUBILITY IN WATER: APPRECIABLE
PERCENT SOLIDS BY WEIGHT: 4 %
PERCENT VOLATILE: 96 %
BY WT/ BY VOL @
F: 105 C:

VOLATILE ORGANIC COMPOUNDS (VOC): < 1 %
WITH WATER: LBS/GAL WITHOUT WATER: LBS/GAL

MOLECULAR WEIGHT:
VISCOSITY: N/A
@
F: 77 C: 25

SECTION 10: STABILITY AND REACTIVITY

STABLE **UNSTABLE**

STABILITY:	**STABLE**
CONDITIONS TO AVOID (STABILITY):	**NONE EXPECTED**
INCOMPATIBILITY (MATERIAL TO AVOID):	**NONE EXPECTED**
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:	**NONE EXPECTED**
HAZARDOUS POLYMERIZATION:	**WILL NOT OCCUR**
CONDITIONS TO AVOID (POLYMERIZATION):	**WILL NOT OCCUR**

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: NOT DETERMINED

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: NOT DETERMINED

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: LANDFILL WITHIN ALL LOCAL STATE AND FEDERAL LAWS
RCRA HAZARD CLASS: NOT DETERMINED

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION
- **PROPER SHIPPING NAME: CLEANING, SCOURING, WASHING COMPOUNDS**
- **HAZARD CLASS: N/A**
- **ID NUMBER: N/A**
- **PACKING GROUP: N/A**
- **LABEL STATEMENT:**

WATER TRANSPORTATION
- **PROPER SHIPPING NAME: N/A**
- **HAZARD CLASS:**
- **ID NUMBER:**
- **PACKING GROUP:**
- **LABEL STATEMENTS:**

AIR TRANSPORTATION
- **PROPER SHIPPING NAME: N/A**
- **HAZARD CLASS:**
- **ID NUMBER:**
- **PACKING GROUP:**
- **LABEL STATEMENTS:**

OTHER AGENCIES: N/A

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS
- **TSCA (TOXIC SUBSTANCE CONTROL ACT): NOT DETERMINED**
- **CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): NOT DETERMINED**
- **SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): NONE**
- **311/312 HAZARD CATEGORIES: NONE**
- **313 REPORTABLE INGREDIENTS: NONE**

STATE REGULATIONS: N/A

INTERNATIONAL REGULATIONS: N/A

SECTION 16: OTHER INFORMATION

OTHER INFORMATION: N/A

PREPARATION INFORMATION: PREPARED BE DAVID WOOD ON MAY 30, 2014

DISCLAIMER: ALL INFORMATION IS BELIEVED TO BE ACCURATE BUT DOES NOT IMPLY A WARRANTY OR GUARANTEE

SAFETY DATA SHEET

FOAM ALCOHOL SANITIZER

FILE NO.: 688
MSDS DATE: 5/30/14

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: FOAM ALCOHOL SANITIZER
PRODUCT CODES: BS1034
MANUFACTURED FOR: BIO-SHINE, INC.
ADDRESS: 190 SUMMERHILL ROAD, SPOTSWOOD, NJ 08884

EMERGENCY PHONE: 513-527-5500 **OTHER CALLS:**
CHEMTREC PHONE: 800-424-9300 **FAX PHONE:** 513-527-5506

PRODUCT USE: HAND SANITIZER

SECTION 2: HAZARD(S) IDENTIFICATION

EMERGENCY OVERVIEW: NO MEDICAL CONDITIONS ARE KNOWN TO BE AGGRAVATED BY THIS PRODUCT
ROUTES OF ENTRY: EYES, INGESTION

POTENTIAL HEALTH EFFECTS
- **EYES:** EYE STING, IRRITATION
- **SKIN:** NONE EXPECTED
- **INGESTION:** NAUSEA
- **INHALATION:** NONE EXPECTED

ACUTE HEALTH HAZARDS: NONE EXPECTED
CHRONIC HEALTH HAZARDS: NONE EXPECTED
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: NONE EXPECTED

CARCINOGENICITY
OSHA: ACGIH: NTP: IARC: OTHER:

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT: ETHYL ALCOHOL

CAS NO. 64-17-5 **% WT** **% VOL** 62 **SARA 313 REPORTABLE**

	ppm	mg/m3
OSHA PEL-TWA:	1000	
OSHA PEL STEL :	1000	
OSHA PEL CEILING:		
ACGIH TLV-TWA:	1000	
ACGIH TLV STEL:	1000	
ACGIH TLV CEILING:		

SECTION 4: FIRST AID MEASURES

EYES: FLUSH WITH WATER FOR 15 MINUTES, CONSULT PHYSICIAN, DO NOT RUB EYES.
SKIN: FLUSH WITH WATER
INGESTION: DO NOT INDUCE VOMITING, CONSULT PHYSICIAN
INHALATION: REMOVE TO FRESH AIR

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER: 19 **LOWER:** 3.3
(% BY VOLUME)

FLASH POINT:
F: 73 C: 23
METHOD USED: TCC

AUTOIGNITION TEMPERATURE: N/A
F: C:

NFPA HAZARD CLASSIFICATION
HEALTH: 1 FLAMMABILITY: 3 REACTIVITY: 0 OTHER:

HMIS HAZARD CLASSIFICATION

HEALTH: 1 **FLAMMABILITY:** 3 **REACTIVITY:** 0 **PROTECTION:**

EXTINGUISHING MEDIA: CO2 OR DRY CHEMICAL
SPECIAL FIRE FIGHTING PROCEDURES: APPROVED RESPIRATORS SHOULD BE WORN, WATER SPRAY TO COOL EQUIPMENT
UNUSUAL FIRE AND EXPLOSION HAZARDS: IF HEATED, VAPOR MAY BE FLAMMABLE. MAY REACT VIGOROUSLY WITH OXIDIZING MATERIALS
HAZARDOUS DECOMPOSITION PRODUCTS: CO2 MAY BE FORMED DURING COMBUSTION

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: DIKE, THEN SHOVEL INTO LEAKPROOF CONTAINER

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: AVOID HEAT. MAY BUILD PRESSURE. VAPOR MAY BE FLAMMABLE.
OTHER PRECAUTIONS: AVOID IGNITION SOURCES

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: NONE
VENTILATION : NORMAL
RESPIRATORY PROTECTION: NONE
EYE PROTECTION: SAFETY GLASSES
SKIN PROTECTION: NORMAL CLEANLINESS
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: NONE
WORK HYGIENIC PRACTICES: NORMAL CLEANLINESS
EXPOSURE GUIDELINES: NORMAL INTENDED USE

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: CLEAR LIQUID
ODOR: ALCOHOLIC ODOR
PHYSICAL STATE: LIQUID

pH AS SUPPLIED: 8.3 TYPICAL **pH (Other):**
BOILING POINT:
F: 176 C: 80
MELTING POINT:
F: N/A C: N/A
FREEZING POINT:
F: NOT DETERMINED C: NOT DETERMINED
VAPOR PRESSURE (mmHg): 40
@
F: 77 C: 25
VAPOR DENSITY (AIR = 1): >1
@
F: N/A C: N/A
SPECIFIC GRAVITY (H2O = 1): 0.894
@
F: 77 C: 25

EVAPORATION RATE: >1
BASIS (=1):
SOLUBILITY IN WATER: COMPLETE
PERCENT SOLIDS BY WEIGHT: 2.5
PERCENT VOLATILE: 97.5
BY WT/ BY VOL @
F: C:

VOLATILE ORGANIC COMPOUNDS (VOC): 72 %
WITH WATER: LBS/GAL WITHOUT WATER: LBS/GAL

MOLECULAR WEIGHT:
VISCOSITY: N/A
@
F: 77 C: 25

SECTION 10: STABILITY AND REACTIVITY

STABLE **UNSTABLE**

STABILITY:	**STABLE**
CONDITIONS TO AVOID (STABILITY):	**OPEN FLAMES, SPARKS, OXIDIZING AGENTS**
INCOMPATIBILITY (MATERIAL TO AVOID):	**OXIDIZING AGENTS**
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:	**CO2 MAY BE FORMED DURING COMBUSTION**
HAZARDOUS POLYMERIZATION:	**WILL NOT OCCUR**
CONDITIONS TO AVOID (POLYMERIZATION):	**WILL NOT OCCUR**

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: NOT DETERMINED

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: NOT DETERMINED

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: LANDFILL WITHIN ALL LOCAL STATE AND FEDERAL LAWS
RCRA HAZARD CLASS: NOT DETERMINED

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION
- **PROPER SHIPPING NAME: ETHANOL SOLUTIONS**
- **HAZARD CLASS: 3**
- **ID NUMBER: UN1170**
- **PACKING GROUP: 2**
- **LABEL STATEMENT:**

WATER TRANSPORTATION
- **PROPER SHIPPING NAME: N/A**
- **HAZARD CLASS:**
- **ID NUMBER:**
- **PACKING GROUP:**
- **LABEL STATEMENTS:**

AIR TRANSPORTATION
- **PROPER SHIPPING NAME: N/A**
- **HAZARD CLASS:**
- **ID NUMBER:**
- **PACKING GROUP:**
- **LABEL STATEMENTS:**

OTHER AGENCIES: N/A

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS
- **TSCA (TOXIC SUBSTANCE CONTROL ACT): NOT DETERMINED**
- **CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): NOT DETERMINED**
- **SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): NONE**
- **311/312 HAZARD CATEGORIES: NONE**
- **313 REPORTABLE INGREDIENTS: NONE**

STATE REGULATIONS: N/A

INTERNATIONAL REGULATIONS: N/A

SECTION 16: OTHER INFORMATION

OTHER INFORMATION: N/A

PREPARATION INFORMATION: PREPARED BY DAVID WOOD ON MAY 30, 2014

DISCLAIMER: ALL INFORMATION IS BELIEVED TO BE ACCURATE BUT DOES NOT IMPLY A WARRANTY OR GUARANTEE

MATERIAL SAFETY DATA SHEET

MSDS Name: PL-375 HEAVY DUTY CONSTRUCTION ADHESIVE - VOC 10.2 OZ
MSDS Number: P72375125-V
Version Number 4
Revision Date: SEP-21-2007
Page Number: 1

SECTION I - PRODUCT AND COMPANY INFORMATION

Product Name: **PL-375 HEAVY DUTY CONSTRUCTION ADHESIVE - VOC 10.2 OZ**
HMIS Hazard Rating: Health: 1 Fire: 3 Reactivity: 0 PPE: B

Company Identification: **HENKEL CORPORATION**
7405 PRODUCTION DRIVE
MENTOR OH 44060

Contact (24 hour): Customer Affairs (800)321-0253
Information phone/Fax: (440) 255-8900 / (440) 974-8358
CHEMTREC Emergency (24 hour): (703) 527-3887 (International)
(800) 424-9300
in Canada CANUTEC 613-996-6666

Product Class ADHESIVE
Trade Name **PL Brand**
Product Code see above

SECTION II - INGREDIENT AND HAZARD INFORMATION

Hazardous Ingredient Name	CAS Number	Percent	TSCA
ACETONE	67-64-1	5 - 10	Y
Methyl Acetate	0079-20-9	5 - 10	Y
HEPTANE	142-82-5	5 - 10	Y
PETROLEUM NAPHTHA	64742-89-8	5 - 10	Y

Ingredient Notes:
Remaining ingredients are not considered OSHA hazardous.

- -

SECTION III - PHYSICAL AND CHEMICAL PROPERTIES

Form: Non-sag mastic
Appearance/Color: Tan
Odor: Sharp
Solubility (in water): insol. in water
pH Value, +/-.3: Not Applicable
Boiling Range: 150.°F - 250.°F (65.56°C - 121.11°C)
Vapor Pressure (mmHg): 155.@ 68.°F (20.°C)

Evaporation Rate:	5.5 times Faster than n-Butyl Acetate
Vapor Density:	Heavier than air
% Volatile, Weight	26.%
% Volatile, Volume	40.%
Specific Gravity:	1.29488
VOC (less H2O or exempt)	< 199 gr/L, 12%

NOTE:
*BOIL RANGE, EVAP RATE, VAPOR DENSITY AND PRESSURE FOR SOLVENT ONLY!

- -

SECTION IV - FIRE FIGHTING MEASURES

Flammability Class	I B
Flash Point:	0.°F - 9.°F (-17.78°C - -12.78°C) Tag Closed Cup
Explosive Range (LEL/UEL):	1.% 6.5%

EXTINGUISHING MEDIA:
Carbon Dioxide---Dry Chemical---Foam
Use water fog to cool material in vicinity of fire.
SPECIAL FIRE-FIGHTING PROCEDURES:
Use self-contained breathing apparatus with full facepiece operated in pressure demand with full protective equipment.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
Any closed container may rupture when exposed to extreme heat.
Solvent vapors are heavier than air and travel along the ground.
Vapors given off are flammable and may be ignited in air explosively.

- -

SECTION V - HEALTH HAZARD DATA

Route	Species	Exposure and Dose
Methyl Acetate		LD50 5000. mg/kg
PETROLEUM NAPHTHA		LD50 5000. PPM

ROUTES OF ENTRY:
ENTRY THROUGH... Inhalation and skin most likely

CARCINOGENICITY...
NTP? N/E | IARC Monographs? N/E | OHSA? NO
EFFECTS OF OVEREXPOSURE
Eyes: Can cause irritation, redness, tearing and blurred vision.

Skin: Prolonged or repeated contact can cause moderate irritation, defatting, and dermatitis.

Inhalation: May cause nose or throat irritation. High concentrations may cause acute central nervous system depression characterized by headaches, dizziness, nausea and confusion.

Ingestion: Can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

FIRST AID MEASURES

Eyes: Flush eyes gently with water for at least 15 minutes lifting eyelids occasionally; get prompt medical attention

Skin: Wash thoroughly with soap and water; apply a mild skin cream. Remove contaminated clothing.

Inhalation: Move affected person to fresh air; if breathing is difficult, administer oxygen; if breathing has stopped, give artificial respiration. Get medical attention.

Ingestion: DO NOT INDUCE VOMITING! Get immediate medical attention.

CHRONIC HAZARDS

NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain, nervous system, liver or kidney damage or may cause cardiac arrhythmia. INTENTIONAL misuse of this product by deliberately inhaling its vapors may be harmful or fatal.

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SECTION VI - STABILITY AND REACTIVITY

Stability: Product is stable under normal storage conditions

Hazardous Polymerization: Will not occur under normal conditions

INCOMPATABILITY:

Keep away from strong oxidizing agents.

CONDITIONS TO AVOID:

Keep away from heat, spark, open flames and any ignition source.

HAZARDOUS DECOMPOSITION PRODUCTS:

Will produce fumes and smoke containing carbon monoxide and dioxide under fire conditions.

- -

SECTION VII - ACCIDENTAL RELEASE AND DISPOSAL MEASURES:

STEPS TO BE TAKEN IN CASE OF SPILL:

Eliminate all ignition sources. Ventilate confined areas. (Open windows and doors). Wear appropriate protective clothing. Cover with absorbent. Scoop into sealable safety container.

WASTE DISPOSAL METHOD:

Dispose of following local, state, and federal regulations.

- -

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

	ACGIH TLV	ACGIH TLV-C	ACGIH STEL	OSHA STEL	OSHA PEL
ACETONE	750.00 PPM	N/est	1000.00 PPM	1000.00 PPM	750.00 PPM
Methyl Acetate	200.00 PPM	N/est	250.00 PPM	250.00 PPM	200.00 PPM
HEPTANE	400.00 PPM	N/est	N/est	500.00 PPM	400.00 PPM
PETROLEUM NAPHTHA	300.00 PPM	N/est	N/est	400.00 PPM	300.00 PPM

RESPIRATORY PROTECTION:
If TLV of the product is exceeded, a NIOSH/MSHA jointly approved air supply respirator is advised in the absence of proper ventilation. OSHA regulations also permit the use of other types of NIOSH/MSHA respirators under specified conditions. (See your safety equipment supplier for more information)

VENTILATION:
Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV.
Ventilate during application and curing of this product.

PROTECTIVE CLOTHING:
Rubber gloves should be worn where skin contact is likely.
Wear impervious clothing and shoes.

EYE PROTECTION:
Chemical goggles or safety glasses should be worn.

HANDLING AND STORAGE PRECAUTIONS:
Keep away from heat, spark and flame.
Keep out of reach of children.
Keep container closed while not in use.
Do not cut or burn recepticals that have contained a solvent based product. Do not reuse this container.
Use only in a well ventilated area.

N/A=NOT APPLICABLE N/AV=NOT AVAILABLE N/E, N/est=NOT ESTABLISHED

- -

SECTION IX - TRANSPORT INFORMATION: (not all sizes available)

GROUND TRANSPORT (DOT) - DOMESTIC
Units less than 5L (1.3 gallons liquid) i.e.10oz, 28oz, 1 gal.

Proper Shipping Name: CONSUMER COMMODITY

Classification: ORM-D
DOT Label Required: ORM-D
Shipping Document: CONSUMER COMMODITY, ORM-D
ERG Code: 171

Units GREATER than 5L i.e. 5 gal. pail
Proper Shipping Name: ADHESIVE
Classification: CLASS 3
DOT Label Required: Flammable Liquid, UN1133, Class 3
Shipping Document: ADHESIVE,3,UN1133, PGIII,
for 50 gal. drum use PG II
ERG Code: 128

AIR TRANSPORT (DOT) - DOMESTIC
Units less than 5L (1.3 gallons liquid) i.e.10oz,28oz, 1gal.

Proper Shipping Name: CONSUMER COMMODITY
Classification: ORM-D
DOT Label Required: ORM-D-AIR
Shipping Document: Consumer Commodity, ORM-D
ERG Code: 171

Units GREATER than 5L i.e. 5 gal. pail
Proper Shipping Name: ADHESIVE
Classification: Class 3
DOT Label Required: Flammable Liquid, UN 1133, Class 3
Shipping Document: ADHESIVE, 3, UN1133, PG III,
for 50 gal. drum use PG II
ERG Code: 128

AIR TRANSPORT (IATA) - INTERNATIONAL
Units less than 5L (1.3 gallons liquid) i.e.10oz,28oz, 1 gal.

Proper Shipping Name: CONSUMER COMMODITY
Classification: class 9
Label Required: ID8000
Shipping Document: Consumer Commodity,9, ID8000
ERG Code: 9L

Units GREATER than 5L i.e. 5 Gal. pail, 50 gal.drum
Proper Shipping Name: ADHESIVE
Classification: Class 3
Label Required: Flammable Liquid, UN 1133, Class 3
Shipping Document: ADHESIVE, 3, UN1133, PGIII,
for 50 gal. drum use PG II
ERG Code: 3L

MARINE - OCEAN TRANSPORT (IMDG)
Units less than 5L (1.3 gallons liquid) i.e.10oz,28oz, 1 gal.

Proper Shipping Name: ADHESIVE
Classification: Class 3
Label Required: Flammable Liquid, UN1133, Class 3, Ltd. Qty.
(on Ocean container only, not required on cartons)
Shipping Document: ADHESIVE,3, UN1133, PG III, LTD.QTY.
EMS Code: F-E, S-D

Units GREATER than 5L i.e. 5 gal. pail, 50 gal drum
Proper Shipping Name: ADHESIVE
Classification: Class 3
Label Required: Flammable Liquid, UN 1133, Class 3
Shipping Document: ADHESIVE, 3, UN1133, PGIII,
for 50 gal. drum use PG II
EMS Code: F-E, S-D

- -

SECTION X - REGULATORY INFORMATION:

SARA Section 311/312 Hazard Categories met: Fire Hazard, Immediate (Acute) and Delayed (Chronic) Health Hazards.
Chemical ingredients are listed on the TSCA inventory.
WARNING: This product contains chemicals known to the State of California to cause cancer.

DISCLAIMER:
The information contained herein is based on data available as of the date of preparation of this MSDS and which we believe to be reliable. However, no warranty is expressed or implied regarding the accuracy of the data. We shall not be responsible for the use of this information, or of any product, method, apparatus mentioned, and user must make his own investigation to determine the suitability of the information or products for his particular purpose, for the protection of the environment,and the health & safety of the users of this material.

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: PLASTER OF PARIS
PRODUCT CODE: 225

HMIS CODES: H F R P
1 0 0

SECTION 1 – MANUFACTURER IDENTIFICATON

MANUFACTURE'S NAME: **UNITED GILSONITE LABORATORIES**
ADDRESS: **1396 JEFFERSON AVENUE**
SCRANTON, PA 18509

EMERGENCY PHONE: **(800) 424-9300**
INFORMATION PHONE: **(570) 344-1202**
NAME OF PREPARER: **R. BARAKO**

DATE REVISED: MAY 2006
SUPERSEDES: AUGUST 2001

SECTION II – HAZARDOUS INGREDIENTS/SARA III INFORMATION

HAZARDOUS COMPONENTS	CAS NUMBER	OCCUPATIONAL EXPOSURE LIMITS OSHA PEL	ACGIH TLV	OTHER	VAPOR PRESSURE mmHg@TEMP	WEIGHT PERCENT
CALCIUM SULFATE	7778-18-9	15 MG/CM	10 MG/CM	NOT ESTAB	N/A	100

No toxic chemical(s) subject to the reporting requirements of Section 313 of Title III and of 40 CFR 372 are present.

SECTION III – PHYSICAL/CHEMCIAL CHARACTERISTICS

BOILING RANGE: N/A
VAPOR DENSITY: N/A
COATING VOC: N/A
SOLUBILITY IN WATER: INSOLUBLE
APPEARANCE AND ODOR: WHITE POWDER

SPECIFIC GRAVITY (H20 =1) 2.6
EVAPORATION RATE: N/A

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

FLASHPOINT: N/A
METHOD USED: N/A
FLAMMABLE LIMITS IN AIR BY VOLUME:
LOWER: N/A **UPPER:** N/A
EXTINGUISHING MEDIA: NONE KNOWN
SPECIAL FIRE FIGHTING PROCEDURES: N/A

UNUSUAL FIRE AND EXPLOSION HAZARDS: N/A

SECTION V – REACTIVITY DATA

STABILITY: PRODUCT IS STABLE
CONDITIONS TO AVOID: N/A

INCOMPATIBILITY (MATERIALS TO AVOID): N/A

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: N/A

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

SECTION VI – HEALTH HAZARD DATA

INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: UNDUE BREATHLESSNESS, WHEEZING, COUGH AND SPUTUM PRODUCTION.

SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE: DUST CAN IRRITATE EYES AND UPPER RESPIRATORY SYSTEM. WHEN MIXED WITH WATER THE PRODUCT CAN DRY THE SKIN AND CAUSE ALKALAI BURNS. HYPERSENSITIVE INDIVIDUALS MAY DEVELOP AN ALLERGIC REACTION.

SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: N/A

INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE: SEE EMERGENCY AND FIRST AID – INGESTION BELOW

HEALTH HAZARDS (ACUTE AND CHRONIC): NONE KNOWN

CARCINOGENICITY: **NTP?** NO **IARC MONOGRAPHS?** NO **OSHA REGULATED?** NO
NONE OF THE COMPONENTS USED IN THIS PRODUCT ARE LISTED BY IARC, NTP OR OSHA AS A CARCINOGEN.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: INHALATION OF DUST CAN AGGRAVATE RESPIRATORY CONDITIONS.

EMERGENCY AND FIRST AID PROCEDURES:

EYES: FLUSH WITH LARGE AMOUNTS OF WATER. CONSULT PHYSICIAN IF IRRITATION PERSISTS.
SKIN: WASH AFFECTED AREA WITH SOAP AND WATER. CONSULT PHYSICIAN IF IRRITATION PERSISTS.
INGESTION: PRODUCT HARDENS WHEN WETTED AND IF INGESTED MAY RESULT IN OBSTRUCTION
INHALATION: REMOVE INDIVIDUAL TO FRESH AIR.

SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: USE DRY CLEAN UP METHODS THAT DO NOT DISPERSE DUST INTO THE AIR. AVOID BREATHING DUST.

WASTE DISPOSAL METHOD: DISPOSE OF IN APPROVED SITES ACCORDING TO LOCAL, STATE AND FEDERAL REGULATIONS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: AVOID BREATHING DUST.

OTHER PRECAUTIONS: N/A

SECTIONS VIII – CONTROL MEASURES

RESPIRATORY PROTECTION: USE NIOSH APPROVED RESPIRATOR FOR DUST PARTICLES.

VENTILATION: USE ADEQUATE VENTILATION IN VOLUME AND PATTERN TO MAINTAIN EXPOSURE LEVELS BELOW THAT LISTED IN SECTION II.

PROTECTIVE GLOVES: USE NEOPRENE GLOVES TO PREVENT SKIN CONTACT.

EYE PROTECTION: USE SAFETY EYEWEAR WITH SPLASH GUARDS.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: N/A

WORK / HYGIENIC PRACTICES: WASH HANDS BEFORE EATING, SMOKING OR USING WASH ROOM.

SECTION IX – DISCLAIMER

This information is furnished without warranty, representation, inducement or license of any kind, except that it is accurate to the best of UGL's knowledge, or obtained from sources believed by UGL to be accurate, and UGL does not assume any legal responsibility for use or reliance upon same. Before using any product, read the label.

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01-19-04

MATERIAL SAFETY DATA SHEET

Playbox Wheat Paste

24007-1001
- 1003

Quick Identifier: Common Name (used on label and list)	Product Code:	Packaging:	Quick Identifier: Common Name (used on label and list)	Product Code:	Packaging:
Playbox Wheat Paste	1132	1 lb pail	Playbox Wheat Paste	1133	3 lb pail

Section 1 – Product Name & Synonyms:		Wheat Paste	
Manufacturer's Name	Specialized Building Products, LLC	**Emergency Telephone: (24 hour service)**	Chemtrec @ 800-422-9300
Street	145 W. Meats Ave.	**Other Information:**	714-279-1042
City, State, and ZIP	Orange, CA 92865	**FAX:**	714-279-1043
Date Prepared:	May 21, 2003	**Web-Site**	**Specializedbuildingproducts.com**

Section 2 – Hazardous Ingredients / Identity

THE ABOVE PRODUCTS MAY CONTAIN THE FOLLOWING COMPONENTS

Hazardous Component(s) Chemical & Common name:	OSHA PEL	ACGIH TLV	% - Optional	CAS Number
Starch	15 mg/m^3** 5 mg/m^3 *	10 mg/m^3 (e)		9005-25-8

* Respirable fraction (PEL)
** Total dust (PEL) or Inhalable Particulate (TLV)

(e) - The value is for particulate matter containing no asbestos and <1% crystalline silica.
R – Measured as respirable fraction of the aerosol.

V2836

OTHER INGREDIENTS / IDENTITY

Hazardous Component(s) Chemical & Common name:	OSHA PEL	% - Optional	CAS Number
None			

SECTION 3 – PHYSICAL & CHEMICAL CHARACTERISTICS

Boiling Point	N/A	Solubility in Water	negligible
Specific Gravity (H_2O = 1)	1.5	Reactivity in Water	none
Vapor Pressure (mm Hg)	N/A	pH	7 – 9
Vapor Density (Air = 1)	N/A	Melting Point	Decomposes prior to melting point
Appearance and Odor	White powder with bland odor		

SECTION 4 – FIRE & EXPLOSION DATA				
Flash Point	N/A	Non-Combustible (?)		Yes
Auto-Ignition Temperature	N/A			See below
Flammability Limits in Air (% volume)	LEL Lower	0.04 oz/ft^3	UEL Upper	N/A .
Special Fire Fighting Procedures	Avoid the formation of a cloud of starch dust			
Unusual Fire and Explosion Hazards	Starch dust may form an explosive mixture with air			

SECTION 5 – PHYSICAL HAZARDS (REACTIVITY DATA)		
Stability	Unstable [ ]	Stable [X]
Conditions to Avoid	Avoid conditions which produce starch dust	
Incompatibility (Materials to Avoid)	Oxidizing Agents	
Hazardous Decomposition Products	none	
Hazardous Polymerization	Will Not Occur [X]	May Occur [ ]

SECTION 6 – HEALTH HAZARDS						
Acute	None		Chronic	None		
Signs and symptoms of Exposure			Starch dust may be irritating to nose & eyes			
Medical Condition Generally Aggravated by Exposure			Respiratory problems			
Chemical Listed as Carcinogen or Potential Carcinogen Y – Yes N – No or Not established P-Potential	None	ACGIH TLV No	NIOSH Yes No	NTP Yes No	IRAC Monograph No	OSHA Yes No

Emergency and First Aid Procedures	Seek medical advise if nose, eyes, skin, and stomach irritation develops	
Routes of Entry	Inhalation	Remove to fresh air
	Eyes	Wash profusely with running water – if irritation persists, call physician
	Skin	Wash with soap and water – if irritation persists, call physician
	Ingestion	If swallowed in large quantities, get medical advise

SECTION 7 – SPECICIAL PRECAUTIONS AND SPILL / LEAK PROCEDURES	
Precautions to be taken in Handling and Storage	Store in a cool, dry, and ventilated area away from heat and oxidizing agents. Avoid the formation of starch dusts.
Other Precautions	None
Steps to be Taken in Case Material is Released or Spilled	Contain and Scoop materials into waste container for disposal
Waste Disposal Methods	Dispose of in accordance with all federal, state, and local regulations. This product is bio-degradable

SECTION 8- SPECIAL PROTECTION INFORMATION/CONTROL MEASURES			
Respiratory Protection (specify type)	NIOSH / OSHA approved respirator for dust.		
Ventilation	Local exhaust preferred; Mechanical Exhaust satisfactory	Special N/A	Other N/A
Protective Gloves	Wear gloves as needed		
Eye Protection	Safety glasses or goggles are recommended		
Other Protective Clothing or Equipment	None		
Work / Hygienic Practices	Maintain eye wash fountain in the work place		

The information and data herein are believed to be accurate and have been compiled from sources believed to be reliable. It is offered for your consideration, investigation and verification. Buyer assumes all risk of use, storage and handling of the product in compliance with applicable federal, state and local laws and regulations. Specialized Building Products, LLC., MAKES NO WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED, CONCERNING THE ACCURACY OR COMPLETENESS OF THE INFORMATION AND DATA HERIN. Specialized Building Products, LLC., will not be liable for claims relating to any party's use of or reliance on information and data contained herein regardless of whether it is claimed that the information and data are inaccurate, incomplete or otherwise misleading.

Material Safety Data Sheet

SECTION I - Material Identity
SECTION II - Manufacturer's Information
SECTION III - Physical/Chemical Characteristics
SECTION IV - Fire and Explosion Hazard Data
SECTION V - Reactivity Data
SECTION VI - Health Hazard Data
SECTION VII - Precautions for Safe Handling and Use
SECTION VIII - Control Measures
SECTION IX - Label Data
SECTION X - Transportation Data
SECTION XI - Site Specific/Reporting Information
SECTION XII - Ingredients/Identity Information

SECTION I - Material Identity

Item Name	
Part Number/Trade Name	31166 OATEY PLUMBER'S PUTTY
National Stock Number	8030P31166
CAGE Code	53472
Part Number Indicator	A
MSDS Number	192489
HAZ Code	B

SECTION II - Manufacturer's Information

Manufacturer Name	OATEY CO
P.O. Box	35906
Street	4700 WEST 160TH ST
City	CLEVELAND
State	OH
Country	US
Zip Code	44135
Emergency Phone	303-623-5716
Information Phone	216 267-7100

MSDS Preparer's Information

Date MSDS Prepared/Revised	06JUN00
Active Indicator	Y

Alternate Vendors

SECTION III - Physical/Chemical Characteristics

Appearance/Odor	WHITE PUTTY WITH PETROLEUM ODOR
Boiling Point	NA
Melting Point	NA
Vapor Pressure	NA
Vapor Density	NA
Specific Gravity	2.0
Evaporation Rate	NA
Solubility in Water	NEGLIGIBLE
Chemical pH	NA
Container Type	R
Container Pressure Code	1
Temperature Code	4
Product State Code	S

SECTION IV - Fire and Explosion Hazard Data

Flash Point	300
Flash Point Method	UNK
Lower Explosion Limit	NA
Upper Explosion Limit	NA
Extinguishing Media	[SMALL] DRY CHEMICAL, CO2, WATER OR FOAM EXTINGUISHER [LARGE] EVACUATE AREA AND CALL FIRE DEPARTMENT IMMEDIATELY
Special Fire Fighting Procedures	EVACUATE AREA AND CALL FIRE DEPT IMMEDIATLEY
Unusual Fire/Explosion Hazards	NR

SECTION V - Reactivity Data

Stability	YES
Stability Conditions to Avoid	KEEP AWAY FROM HEAT, FLAME AND STRONG OXIDIZING AGENTS

Materials to Avoid	OXIDIZING AGENTS
Hazardous Decomposition Products	CARBON DIOXIDE, CARBON MONOXIDE AND ALIPHATICS
Hazardous Polymerization	NO
Polymerization Conditions to Avoid	WILL NOT OCCUR
LD50 - LD50 Mixture	NR

SECTION VI - Health Hazard Data

Route of Entry: Skin	YES
Route of Entry: Ingestion	YES
Route of Entry: Inhalation	YES
Health Hazards - Acute and Chronic	[INHAL] NOT EXPECTED TO BE A HAZARD OR AGGRAVATE PRE-EXISTING SKIN CONDITIONS. [SKIN] CONTACT MAY IRRITATE SKIN. LONG TERM CONTACT MAY LEAD TO DERMATITIS. [EYE] CONTACT MAY CAUSE IRRITATION. [INGEST] MAY CAUSE A LAXATIVE EFFECT INCLUDING CRAMPS AND DIARRHEA, POSSIBLY LEADING TO DEHYDRATION AND ELECTROLYTE IMBALANCE
Carcinogenity: NTP	NR
Carcinogenity: IARC	NR
Carcinogenity: OSHA	NR
Explanation of Carcinogenity	NR
Symptoms of Overexposure	SEE ABOVE
Medical Cond. Aggrevated by Exposure	NR
Emergency/First Aid Procedures	[SKIN] IF IRRITATED, WASH THOROUGHLY WITH SOAP AND WATER. CALL A POISON CONTROL CENTER OR PHYSICIAN IF IRRTATION PERSISTS. [EYES] IRRIGATE EYES FOR 15 MIN WITH PLENTY OF WATER AND CALL A POISON CONTROL CENTER OR PHYSICIAN IF IRRITATION PERSISTS. [INHAL] MOVE TO FRESH AIR. GIVE OXYGEN/ARTIFICIAL RESPIRATION AS NEEDED. KEEP VICTIM QUIET AND WARM. CALL A POISON CONTROL CENTER OR PHYSICIAN IMMEDIATELY. [INGEST] DRINK WATER. DO NOT INDUCE VOMITING AND CALL A POISON CONTROL CENTER OR PHYSICIAN IMMEDIATELY. AVOID ALCOHOLIC BEVERAGES. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON

SECTION VII - Precautions for Safe Handling and Use

Steps if Material Released/Spilled	VENTILATE AREA, STOP CANNISTER RESPIRATOR IN ABSENCE OF VENTILATION
Neutralizing Agent	NR
Waste Disposal Method	DISPOSE IAW FEDERAL, STATE, LOCAL REGULATIONS
Handling and Storage Precautions	KEEP AWAY FROM HEAT, PSARKS AND FLAMES, STORE IN COOL DRY PLACE
Other Precautions	CONTAINERS, EVEN EMPTIES WILL RETAIN RESIDUE AND VAPORS

SECTION VIII - Control Measures

Respiratory Protection	NIOSH/MSHA APPROVED CANNISTER RESPIRATOR IN ABSENCE OF ADEQUATE VENTILATION
Ventilation	EXHAUST VENTILATION CAPABLE OF MAINTAINING EMISSIONS AT THE POINT OF USE BELOW PEL
Protective Gloves	NR
Eye Protection	NR
Other Protective Equipment	NR
Work Hygenic Practices	WASH HANDS AFTER USE
Supplemental Health/Safety Data	NR
Disposal Code	O

SECTION IX - Label Data

Protect Eye	NO
Protect Skin	NO
Protect Respiratory	NO
Chronic Indicator	UNKNOWN
Contact Code	UNKNOWN
Fire Code	UNKNOWN
Health Code	UNKNOWN
React Code	UNKNOWN

SECTION X - Transportation Data

SECTION XI - Site Specific/Reporting Information

Volatile Organic Compounds (P/G)	0
Volatile Organic Compounds (G/L)	0

SECTION XII - Ingredients/Identity Information

Ingredient #	01
Ingredient Name	HYDROCARBONS (10-30%)
CAS Number	64742525
Proprietary	NO

Plumber's Putty 31166

Percent	30
Ingredient #	02
Ingredient Name	*LIMESTONE (60-80%)
CAS Number	1317653
Proprietary	NO
Percent	80
Ingredient #	03
Ingredient Name	*TALC (1-10%)
CAS Number	14807966
Proprietary	NO
Percent	10
Ingredient #	04
Ingredient Name	*CLAYS (1-10%)
CAS Number	68953582
Proprietary	NO
Percent	10
Ingredient #	05
Ingredient Name	*FISH OILS (1-10%)
CAS Number	1003
Proprietary	NO
Percent	10

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MATERIAL SAFETY DATA SHEET : PLUM-IT (24 OZ) PAGE : 01

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DATE OF ISSUE	SUPERSEDES
03/21/86	11/08/85

SECTION I - GENERAL INFORMATION

CHEMICAL NAME & SYNONYMS	TRADE NAME & SYNONYMS
N/A	PLUM-IT (24 OZ)

CHEMICAL FAMILY	FORMULA
SOLVENT/ACID DRAIN OPENER	X<--MIXTURE

MANUFACTURERS NAME:
MANTEK, DIVISION OF NCH CORP.

ADDRESS (NUMBER, STREET, CITY, STATE & ZIP CODE)
BOX 152170
IRVING, TEXAS 75015

PREPARED BY:	PRODUCT CODE NUMBER	EMERGENCY TELEPHONE NUMBER
MARK COHEN/T.S. CHEMIST	5921	214-438-4144 EXT. 013

SECTION II- HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS AS THE PRODUCT MIXTURE HAS NOT BEEN TESTED AS A WHOLE.

CHEMICAL NAME (INGREDIENTS)	HAZARD	TLV*	PEL*	CAS#
SULFURIC ACID	CORROSIV	1MG/M3	2. N/A	7664-93-9
ALIPHATIC PETROLEUM DISTILLATE	COMB.	100PPM	5. 575MG/M3	5 64742-47-8
MONOCHLOROTOLUENE	COMB.	50PPM	5. 250MG/M3	5 95-49-8

SECTION III - PHYSICAL DATA

BOILING PT.(FAHRENHEIT)	625.00	SPEC GRAVITY (H2O=1)	:0.94/1.835
VAPOR PRESSURE (MM HG).	N/A	COLOR	WATER WHITE/BLUE GRN

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VAPOR DENSITY (AIR=1)	N/A	ODOR	SOLVENT/SULFUR
PH @ 100%	10% < 1	CLARITY	TRANSPRNT/TRANSLUCNT
PERCENT, VOLATILE BY VOLUME (%)	4.0	EVAPORATION RATE (BU AC = 1)	N/A
SOLUBILITY IN WATER	APPRECIABLE		
VISCOSITY	NON-VISCOUS		

SECTION IV - FIRE AND EXPLOSION HAZARD

FLASH POINT (METHOD USED)	FLAMMABLE LIMITS	LEL	UEL
130 F. T.O.C./NON-FLAM		N/A	N/A

EXTINGUISHING MEDIA "ALCOHOL" DRY WATER
X<--FOAM X<--FOAM X<--CO2 X<--CHEMICAL <--SPRAY <--OTHER

SPECIAL FIRE FIGHTING PROCEDURES
USE NIOSH/MSHA APPROVED SELF-CONTAINED BREATHING APPARATUS WHERE THIS MATERIAL IS INVOLVED IN A FIRE. BURNING IN OPEN FLAME CAN FORM TOXIC CLOUDS, ESPECIALLY HYDROGEN CHLORIDE GAS.

UNUSUAL FIRE & EXPLOSION HAZARDS

DO NOT USE WATER SPRAY AS THIS CAN RESULT IN A POSSIBLE VIOLENT REACTION. HEAVY VAPOR CAN TRAVEL TO IGNITION SOURCE AND FLASHBACK.

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE :

NOT ESTABLISHED FOR MIXTURE. SEE SECTION II.

EFFECTS OF OVEREXPOSURE

- ACUTE - (SHORT TERM EXPOSURE)

A DILUTE SOLUTION IS AN IRRITANT TO SKIN AND MUCOUS MEMBRANES DUE TO ITS ACIDITY AND MAY CAUSE IRREPARABLE CORNEAL DAMAGE AND BLINDNESS AS WELL AS SCARRING OF THE EYELIDS. A CONCENTRATED SOLUTION CAUSES BURNING AND CHARRING OF THE SKIN WHICH IS EVEN MORE RAPIDLY INJURIOUS TO MUCOUS MEMBRANES AND EXCEEDINGLY DANGEROUS TO THE EYES. INGESTION CAUSES SERIOUS BURNS OF THE MOUTH OR PERFORATION OF THE ESOPHAGUS OR STOMACH. INHALATION MAY CAUSE DIFFICULT BREATHING, COUGH, CENTRAL NERVOUS DEPRESSION AND TRANSIENT ANESTHESIS.

- CHRONIC - (LONG TERM EXPOSURE)

CONTINUOUS INHALATION OF MIST OF SOLVENT VAPORS MAY RESULT IN DAMAGE TO

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LIVER AND KIDNEYS. OTHER SKIN, EYES, AND INGESTION EFFECTS ARE THOSE SECONDARY TO TISSUE DESTRUCTION.

PRIMARY ROUTE OF ENTRY: <-- INHALATION <-- INGESTION X<-- ABSORPTION

EMERGENCY & FIRST AID PROCEDURES

INHALATION :

GET PERSON OUT OF CONTAMINATED AREA TO FRESH AIR. IF BREATHING HAS STOPPED, ARTIFICIAL RESPIRATION SHOULD BE STARTED. OXYGEN MAY BE ADMINISTERED, IF READILY AVAILABLE. SEEK MEDICAL ATTENTION IMMEDIATELY.

EYE CONTACT:

IMMEDIATELY FLUSH EYES WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES HOLDING EYELIDS APART TO ENSURE FLUSHING OF THE ENTIRE EYE SURFACE. WASHING EYES WITHIN 1 MINUTE IS ESSENTIAL TO ACHIEVE MAXIMUM EFFECTIVENESS. SEEK MEDICAL ATTENTION IMMEDIATELY.

SKIN CONTACT:

IMMEDIATELY WASH CONTAMINATED SKIN WITH PLENTY OF WATER. THIS MAY BE FOLLOWED WITH A RINSE WITH SODIUM BICARBONATE (3% SOLUTION) IF AVAILABLE. REMOVE CONTAMINATED CLOTHING AND FOOTWEAR AND WASH CLOTHING BEFORE REUSE. DISCARD FOOTWEAR WHICH CANNOT BE DECONTAMINATED. SEEK MEDICAL ATTENTION IMMEDIATELY.

INGESTION :

IF SWALLOWED, DO NOT INDUCE VOMITING. GIVE LARGE QUANTITIES OF WATER. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. SEEK MEDICAL ATTENTION IMMEDIATELY.

NOTES TO PHYSICIAN :

HAZARDOUS DECOMPOSITION PRODUCTS CONTINUED: HYDROGEN EVOLUTION IN CLOSED METAL CONTAINERS. CAN EMIT TOXIC FUMES AND NITROGEN. CARBON MONOXIDE MAY BE FORMED IN INCOMPLETE COMBUSTION.

SECTION VI - TOXICITY INFORMATION

SULFURIC ACID
- EYE-RBT: 1.3MG SEV 4.
- UNK-MAN: 135MG/KG 4.
- ORL-RAT LD50: 2140MG/KG 4.
- INH-GPG LC50: 8MG/M3 4.

MONOCHLOROTOLUENE
- INH-RAT LCLO: 17,5000PPM 2.
- EYE-RAB: 0.1MG/24H SEV 2.
- ORL-RAT LD50: 3410MG/KG 5.
- INH-RAT LC50: 7119PPM 5.

ALIPHATIC PETROLEUM DISTILLATE
- UNK-MAN LDLO: 1176MG/KG 2.
- ORL-RAT LD50: 28G/KG/ 2.
- ORL-RBT LD50: 28G/KG 2.

SECTION VII - REACTIVITY DATA

	X<--STABLE <--UNSTABL	CONDIDTIONS TO AVOID
STABILITY	N/A	

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INCOMPATIBILITY (MATERIALS TO AVOID)
COMBUSTIBLE SOLVENTS, STRONG OXIDIZERS, ALKALIS, METALS AND CHLORATES.

HAZARDOUS DECOMPOSITION PRODUCTS
SULFUR DIOXIDE, HYDROGEN CHLORIDE, CHLORINATED METHANES.
SEE NOTES TO PHYSICIAN.

HAZARDOUS	WILL NOT	MAY	CONDITIONS TO AVOID
	X <--OCCUR	<--OCCUR	
POLYMERIZATION	N/A		

SECTION VIII - SPILL OR LEAK PROCEDURES

STEPS TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
NIOSH/MSHA APPROVED SELF-CONTAINED BREATHING APPARATUS. FOLLOW OSHA REGULATIONS FOR RESPIRATOR USE (SEE 29 CFR 1910.134). GAS-TIGHT GOGGLES, COVERALLS AND RUBBER BOOTS, GLOVES AND APRON. ADD NON-COMBUSTIBLE DRY ABSORBANT, SHOVEL OR SWEEP UP. PLACE IN AN APPROVED DOT CONTAINER AND SEAL. WASH RESIDUE WITH LARGE AMOUNTS OF WATER. WASH CONTAMINATED CLOTHES.

WASTE DISPOSAL METHOD
DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS CONCERNING HEALTH AND POLLUTION, VIA APPROVED CHEMICAL WASTE DISPOSAL METHOD, IF REGULATIONS PERMIT. DISPOSE OF CLEAN UP DEBRIS, CONTAMINATED MATERIAL AND RESIDUES.

NEUTRALIZING AGENT
ADD SLOWLY TO A SOLUTION OF SODA ASH AND SLAKED LIME WITH STIRRING; FLUSH TO DRAIN WITH LARGE VOLUMES OF WATER.

SECTION IX - SPECIAL PROTECTION INFORMATION

REQUIRED VENTILATION
GOOD INDUSTRIAL HYGIENE PRACTRICE DITATES THAT THE WORK AREA SHOULD BE ISOLATED AND CONTAINED AND PROVIDED WITH ADEQUATE LOCAL EXHAUST VENTILATION OR OTHER CONTROLS TO MAINTAIN THE AIR CONCENTRATION OF SULFURIC ACID BELOW 1MG/M3 AS REQUIRED BY OSHA.

RESPIRATORY PROTECTION
NIOSH HAS CONCLUDED THAT ADHERENCE TO THE PRESENT FEDERAL STANDARD OF 1MG/M3 OF AIR, IN CONJUNCTION WITH A STRONG PROGRAM OF WORK PRACTICES, WILL PROTECT THE WORKER FROM SULFURIC ACID EXPOSURE FOR UP TO 10 HOUR WORKDAY, 40 HOUR WORK WEEK OVER A WORKING LIFETIME. THE IDLH LEVELK IS 80 MG/M3. RECOMMENDED RESPIRATOR SELECTION. FOR EXPOSURES:
< = 50MG/M3 - GMAGHIEP/HIEPF/SAF/SCBAF
< = 100MG/M3 - SAF:PD,PP,CF
ESCAPE: GMAGHIEP/SCBA

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PROTECTIVE GLOVES
RUBBER, SYNTHETIC ELASTOMERS, PVC OR OTHER
PLASTIC SHOULD BE WORN.

EYE PROTECTION
CHEMICAL SPLASH GOGGLES AND FACE SHIELD SHOULD BE
WORN DEPENDING UPON THE EXTENT OF EXPOSURE.

OTHER PROTECTION
COVERALLS, RUBBER APRON AND SAFETY BOOTS. SPLASH
PROTECTION RECOMMENDED.

SECTION X - STORAGE AND HANDLING INFORMATION

STORAGE TEMPERATURE	INDOOR	HEATED	REFRIGERATED	OUTDOOR
100 F.<--MAX 32 F.<--MIN	X			

PRECAUTIONS TO BE TAKEN IN HANDLING & STORING
STORE IN ORIGINAL CONTAINER. DO NOT GET IN EYES,
ON SKIN OR ON CLOTHING. DO NOT TAKE INTERNALLY.
AVOID BREATHING MIST OR FUMES. PROTECT AGAINST
PHYSICAL DAMAGE AND WATER. SEPARATE CARBIDES,
CHLORATES, FULMINATES, NITRATES, PICRATES,
POWDERED METALS AND COMBUSTIBLE MATERIALS.

OTHER PRECAUTIONS
STORE IN A COOL, DRY PLACE. FOLLOW LABEL
DIRECTIONS. KEEP OUT OF REACH OF CHILDREN.
NOTE: WATER ON SULFURIC ACID WILL CAUSE
SPATTERING, FUMING AND EVOLUTION.

SECTION XI - TRANSPORTATION * (FOR FUTURE USE)

APPLICABLE REGULATIONS
<--49 CFR <--IMCO <--TARIFF 6 D <--IATA <--MILITARY AIR (AFR 71-4)

SHIPPING NAME

HAZARD CLASS | ID NUMBER | REPORT QTY

LABELS | LIMITED QTY

UNIT CONTAINER

DOT SPS CONTAINER | NET EXPLOSIVE WT.

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AEROSOL PROPELLANT(S)

SECTION XII - REFERENCES

1. NIOSH POCKET GUIDE TO CHEMICAL HAZARDS, 1978.
2. NIOSH REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, 1982.
3. INDUSTRIAL HYGIENE & TOXICOLOGY, 3RD EDITION, F.A. PATTY, 1981.
4. DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, 6TH EDITION, N. IRVING SAX.
5. VENDOR'S MATERIAL SAFETY DATA SHEET.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION, HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THIS DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

MANTEK, DIVISION OF NCH CORP. ASSUMES NO RESPONSIBILITY FOR PERSONAL INJURY OR PROPERTY DAMAGE CAUSED BY THE USE , STORAGE OR DISPOSAL OF THE PRODUCT IN A MANNER NOT RECOMMENDED ON THE PRODUCT LABEL. USERS ASSUME ALL RISKS ASSOCIATED WITH SUCH UNRECOMMENDED USE, STORAGE, OR DISPOSAL OF THE PRODUCT.

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Spartan Chemical Company, Inc.
Material Safety Data Sheet

SECTION I: PRODUCT INFORMATION

Product Name or Number (as it appears on label):
PLUS 5 CARPET SHAMPOO
Product Number: 3005

Product Division:
Janitorial

Spartan Chemical Company , Inc.
1110 Spartan Drive
Maumee OH 43537

Product/Technical Information: **1-(800)-537-8990**
Medical Emergency: **1-(888)-314-6171 (24 hours)**
Chemical Leak/Spill Emergency: **CHEMTREC 1-(800) 424-9300 (24 hours)**

Shipping Description: Non-Hazardous Products

NFPA Ratings:	HMIS Ratings:
Health: 1- Slight	**Health:** 1- Slight
Fire: 0 - Minimal	**Fire:** 0 - Minimal
Reactivity: 0 - Minimal	**Reactivity:** 0 - Minimal
	Pers. Prot. Equip.: See Section VIII

SECTION II: HAZARDOUS INGREDIENTS

(Listed when present at 1% or greater, carcinogens at 0.1% or greater) All component chemicals are listed or exempted from listing on the "TSCA Inventory" of chemical substances maintained by the U.S. Environmental Protection Agency.

Chemical Name(s)	%Wt	CAS Registry No.	Table Z-1-A TWA mg/m^3	STEL mg/m^3	CEILING mg/m^3	NTP, IARC or OSHA Carcinogen
Sodium lauryl sulfate	5-10	151-21-3	Not Established	Not Established	Not Established	No
Sodium tripolyphosphate	1-5	7758-29-4	Not Established	Not Established	Not Established	No
Sodium xylene sulfonate	1-5	1300-72-7	Not Established	Not Established	Not Established	No
Styrene maleic anhydride	1-5	160611-48-3	Not Established	Not Established	Not Established	No
polymer	-	-	-	-	-	-
Amyl acetate	< 1	628-63-7	525 (263 ACGIH)	525 (ACGIH)	Not Established	No

SECTION III: PHYSICAL DATA

Boiling Point:	212 °F	Vapor Pressure:	Unknown
Vapor Density (AIR = 1):	Unknown	Solubility in Water:	Complete
pH:	9.5-10	Specific Gravity (H_2O=1):	1.058
Evaporation Rate (but.ace.=1):	<1	Percent Solid by Weight:	15-20
Physical State:	Liquid		
Appearance & Odor:	Yellow liquid, banana fragrance		

SECTION IV: FIRE & EXPLOSIVE HAZARD DATA

Flash Point:	> 212°F	Method Used:	ASTM-D56
Flammable Limits:	N/A	Flame Extension:	N/A
Extinguishing Media:	Product does not support combustion. Use extinguishing media appropriate for surrounding fire.		
Special Fire Fighting Procedures:	Wear NIOSH approved self-contained breathing apparatus and protective clothing. Cool fire-exposed containers with water spray.		
Unusual Fire & Explosive Hazards:	Combustion products are toxic.		

SECTION V: HEALTH HAZARD DATA

Threshold Limit Value:	Not Established	Primary Routes of Entry:	Skin Contact, Eyes and Oral

Effects of Overexposure- Conditions to Avoid:	**Causes eye irritation :** Symptoms may include pain, redness, swelling and tearing **May cause skin irritation :** Symptoms may include pain, redness and swelling. **May be harmful if swallowed :** Symptoms may include nausea, vomiting, pain and diarrhea. **Inhalation of product vapor or mist may cause respiratory irritation:** Symptoms may include nasal discomfort and coughing. **Do not get in eyes, on skin or on clothing. Do not taste or swallow. Avoid breathing product vapor or mist. Wash thoroughly after handling .**
Conditions Aggravated by Use:	Use of this product may aggravate preexisting skin; eye and respiratory disorders including asthma and dermatitis.
Emergency & First Aid Procedures :	
Eyes:	Flush eyes with water for at least 15 minutes. Remove contact lenses. Get medical attention.
Skin:	Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if irritation persists. Wash contaminated clothing before reuse
Ingestion:	Do not induce vomiting. Drink one or two glasses of water to dilute product. Get medical attention. Never give anything by mouth to an unconscious person.
Inhalation:	Move person to fresh air. Get medical attention if irritation persists.

SECTION VI: REACTIVITY DATA

Stability:	Stable	Incompatible Materials:	None known
Hazardous Decomposition Products:	Carbon monoxide, Carbon dioxide	Hazardous Polymerization:	Will Not Occur

SECTION VII: SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled:	Small spills of one gallon or less may be flushed with plenty of water to sanitary sewer system (If permitted by local sewer regulations). Dike and contain large spills with inert material and transfer liquid to containers for disposal. Keep spill out of storm sewers and waterways.
Waste Disposal Method:	Dispose of in compliance with all federal, state and local laws and regulations.

SECTION VIII: SPECIAL PROTECTION INFORMATION

Respiratory Protection:	Not normally required when good general ventilation is provided. However if respiratory irritation occurs; the use of a NIOSH approved respirator suitable for the use-conditions and chemicals in Section II should be considered.
Ventilation:	Provide good general ventilation. Local exhaust ventilation may be necessary for some operations.
Protective Gloves(Specify Type):	Rubber or other impervious gloves
Eye Protection(Specify Type):	Splash goggles are recommended to prevent eye contact.
Other Protective Equipment:	See 29 CFR 1910.132-138 for further guidance.

SECTION IX: SPECIAL PRECAUTIONS

Precautions; Handling & Storing:	Do not freeze. Store at temperatures above 50°F/10°C.
Other Precautions:	Keep out of reach of children

© SCC 02/10/2012

PLUS 5 CARPET SHAMPOO
Ref: 29 CFR 1910.1200 (OSHA)

Name:	Ronald T. Cook	Title:	Manager, Regulatory Affairs
Effective Date:	02/10/2012	Supercedes:	06/08/2009
Changes:	Update Section II		

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STANLEY-BOSTITCH -- BC601 PNEUMATIC TOOL LUBRICANTS -- 9150-00F025509

Product Identification

Product ID:BC601 PNEUMATIC TOOL LUBRICANTS
MSDS Date:01/01/1991
FSC:9150
NIIN:00F025509
MSDS Number: BPSCV
=== Responsible Party ===
Company Name:STANLEY-BOSTITCH
Address:ROUTE 2
City:EAST GREENWICH
State:RI
ZIP:02818
Country:US
Info Phone Num:401-884-2500
Emergency Phone Num:401-884-2500
CAGE:0E7F8
=== Contractor Identification ===
Company Name:STANLEY-BOSTITCH
Address:ROUTE 2
Box:City:EAST GREENWICH
State:RI
ZIP:02818
Country:US
Phone:401-884-2500
CAGE:0E7F8

Composition/Information on Ingredients

Ingred Name:MINERAL OIL, PETROLEUM DISTILLATES, SOLVENT-REFINED HEAVY PARAFFINIC, LUBRICATING OIL BASE STOCK
CAS:64741-88-4
RTECS #:PY8040500
OSHA PEL:5 MG/CUM
ACGIH TLV:5 MG/CUM

Hazards Identification

Routes of Entry: Inhalation:YES Skin:NO Ingestion:NO
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:EYES/SKIN: IRRITATION. INHALATION: LUNG IRRITATION.
Explanation of Carcinogenicity:NONE

First Aid Measures

First Aid:SKIN: WASH W/SOAP & WATER. EYES: FLUSH W/PLENTY OF WATER FOR

15 MIN. INHALATION: REMOVE TO FRESH AIR. INGESTION: DON'T INDUCE VOMITING. OBTAIN MEDICAL ATTENTION IN ALL CASES.

Fire Fighting Measures

Flash Point Method:COC
Flash Point:141C/285F
Lower Limits:1%
Upper Limits:6%
Extinguishing Media:DRY CHEMICAL, FOAM, CO2
Fire Fighting Procedures:USE SELF-CONTAINED BREATHING APPARATUS

Accidental Release Measures

Spill Release Procedures:PREVENT SPREAD OF SPILL, ABSORB W/SAND OR INERT MATERIALS, SWEEP OR SCOOP UP & REMOVE.

Handling and Storage

Handling and Storage Precautions:USE METHODS GENERALLY ADVOCATED FOR PETROLEUM PRODUCTS. DON'T MIX W/OXIDIZING MATERIALS.
Other Precautions:AVOID PROLONGED OR REPEATED CONTACT W/SKIN, INHALATION OF FUMES.

Exposure Controls/Personal Protection

Respiratory Protection:AS REQUIRED
Ventilation:LOCAL EXHAUST
Protective Gloves:RECOMMENDED
Eye Protection:GOGGLES
Other Protective Equipment:APRON
Work Hygienic Practices:DON'T WEAR CONTAMINATED CLOTHING.
Supplemental Safety and Health

Physical/Chemical Properties

Vapor Pres:<0.01
Vapor Density:>12
Spec Gravity:0.875
Evaporation Rate & Reference:(BU AC = 1): <0.01
Solubility in Water:NEGLIGIBLE
Appearance and Odor:PALE CLEAR LIQUID, PETROLEUM ODOR.
Percent Volatiles by Volume:NEGL

Stability and Reactivity Data

Stability Indicator/Materials to Avoid:YES
STRONG OXIDIZERS

Hazardous Decomposition Products:CO

========== Disposal Considerations ==========

Waste Disposal Methods:DISPOSE OF IN ACCORDANCE W/LOCAL, STATE, & FEDERAL REGULATIONS.

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M A T E R I A L S A F E T Y D A T A S H E E T

Polyblend Non-Sanded Grout

HMIS

HEALTH	**1**
FLAMMABILITY	**0**
REACTIVITY	**0**
PERSONAL PROTECTION	**E**

1. Product And Company Identification

Supplier
CUSTOM BUILDING PRODUCTS
10400 Pioneer Blvd., Unit #3
Santa Fe Springs, CA 90670 UNITED STATES

Company Contact: GEORGE MARCINA
Telephone Number: (562) 968-2980 Ext 103
FAX Number: (562) 903-2697
E-Mail: georgem@cbpmail.net
Web Site: www.custombuildingproducts.com

Manufacturer
CUSTOM BUILDING PRODUCTS
10400 Pioneer Blvd., Unit #3
Santa Fe Springs, CA 90670 UNITED STATES

Company Contact: GEORGE MARCINA
Telephone Number: (562) 968-2980 Ext 103
FAX Number: (562) 903-2697
E-Mail: georgem@cbpmail.net
Web Site: www.custombuildingproducts.com

Supplier Emergency Contacts & Phone Number
GEORGE MARCINA: (562) 968-2980

Manufacturer Emergency Contacts & Phone Number
GEORGE MARCINA: (562) 968-2980

Issue Date: 01/30/2007

Product Name: Polyblend Non-Sanded Grout
Chemical Name: Grouts
CAS Number: Not Established
Chemical Formula: Mixture
MSDS Number: 818
Product Code: 7100

2. Composition/Information On Ingredients

Ingredient Name	CAS Number		Percent Of Total Weight
Calcium Sulfate	7778-18-9		1 - 5
Iron Oxide Pigments	1317-61-9		0 - 5
Titanium Dioxide	13463-67-7		1 - 5
Calcium Carbonate	1317-65-3		30 - 40
Portland Cement	65997-15-1		40 - 50

3. Hazards Identification

Primary Routes(s) Of Entry
Inhalation, Skin Contact, Eye Contact, Ingestion

Eye Hazards
Irritant, severe eye irritation. May cause eye injury. Effects may be delayed.

Skin Hazards
Contains Portland cement and exposure to dry Portland cement may cause drying of skin with consequent mild irritation. Prolonged contact with wet Portland cement may cause severe, potentially irreversible damage to the skin in the form of chemical (caustic) burns.

3. Hazards Identification - Continued

Ingestion Hazards

Ingestion is not known to be harmful, however the product contains Portland cement which is caustic to mucus tissue and should not be consumed.

Inhalation Hazards

Causes respiratory tract irritation. May cause nose, throat, and lung irritation. May cause delayed lung injury.

Chronic/Carcinogenicity Effects

MAY CONTAIN TRACES OF SILICA SAND, KNOWN HUMAN CARCINOGEN. MAY CONTAIN OTHER CHEMICALS ON CA PROPOSITION 65 LIST.

4. First Aid Measures

Eye

In case of contact, hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately if irritation develops and persists.

Skin

In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Get medical attention immediately if irritation (redness, rash, blistering) develops and persists.

Ingestion

DO NOT INDUCE VOMITING. If victim is fully conscious, give one or two cups of water or milk to drink. Get medical attention immediately.

Inhalation

If inhaled, remove to fresh air. Consult a physician immediately if irritation persists. Do not give an unconscious person anything to drink.

5. Fire Fighting Measures

Flash Point: N/A °F
Flash Point Method: N/A
Lower Explosive Limit: N/A
Upper Explosive Limit: N/A

6. Accidental Release Measures

Avoid generating dust. Sweep up and remove immediately. Use appropriate personal protective equipment (PPE). OBSERVE ALL FEDERAL, STATE AND LOCAL REGULATIONS REGARDING NOTIFICATIONS OF ACCIDENTAL RELEASES.

7. Handling And Storage

Handling And Storage Precautions

Use only with adequate ventilation.

Handling Precautions

Avoid creating dust. Avoid breathing dust. Avoid contact with skin and clothing. Avoid contact with eyes.

Storage Precautions

Keep dry until ready to use.

Work/Hygienic Practices

Use good personal hygiene. Wash thoroughly with soap and water after handling.

8. Exposure Controls/Personal Protection

No Data Available...

8. Exposure Controls/Personal Protection - Continued

Engineering Controls

Use with adequate ventilation.

Eye/Face Protection

Safety glasses with side shields or goggles recommended.

Skin Protection

If hands or feet will be exposed, wear impervious gloves and/or boots.

Respiratory Protection

In case of inadequate ventilation and when exposed to dust above the recommended limits, wear a suitable NIOSH-approved respirator.

Ingredient(s) - Exposure Limits

Calcium Sulfate
- TLV = 10 mg/m3
- PEL = 15 mg/m3 (total)
- PEL = 5 mg/m3 (respirable)

Titanium Dioxide
- ACGIH TLV-TWA 10 mg/m3
- OSHA PEL-TWA 15 mg/m3

Calcium Carbonate
- OSHA - PEL - TWA - 15mg/m3
- Niosh - REL 10 mg/m3
- ACGIH- TLV - 10 mg/m3
- OSHA - PEL - TWA - 5 mg/m3

Portland Cement
- OSHA - PEL - 5mg/m3
- OSHA - PEL - TWA - 50mppcf
- ACGIH - TLV - 10mg/m3

9. Physical And Chemical Properties

Appearance

Free flowing colored powder.

Chemical Type: Mixture
Physical State: Solid
Melting Point: NA °F
Boiling Point: N/A °F
Specific Gravity: 2.7
Vapor Density: N/A
Solubility: MINIMAL
Evaporation Rate: N/A

10. Stability And Reactivity

Stability: STABLE
Hazardous Polymerization: WILL NOT OCCUR.

Conditions To Avoid (Stability)

Avoid unintentional contact with water.

Incompatible Materials

Contains Portland cement which, when wet, is highly alkali. As a result, it is incompatible with acids, ammonium salts, aluminum and other alkali and alkaline earth metals.

11. Toxicological Information

Chronic/Carcinogenicity

MAY CONTAIN TRACES OF SILICA SAND, KNOWN HUMAN CARCINOGEN. MAY CONTAIN OTHER CHEMICALS ON CA PROPOSITION 65 LIST.

12. Ecological Information

No Data Available...

13. Disposal Considerations

Dispose in accordance with applicable federal, state and local government regulations.

RCRA Information

Not considered RCRA Hazardous Waste.

14. Transport Information

DOT Shipping Label

NOT REGULATED

15. Regulatory Information

SARA Section 313 Notification

This product does not contains toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.

Ingredient(s) - State Regulations

- Titanium Dioxide
  - New Jersey - Workplace Hazard
  - Pennsylvania - Workplace Hazard
  - New York City - Hazardous Substance
- Calcium Carbonate
  - Pennsylvania - Workplace Hazard
- Portland Cement
  - New Jersey - Workplace Hazard
  - Pennsylvania - Workplace Hazard

16. Other Information

HMIS Rating

Health: 1
Fire: 0
Reactivity: 0
Personal Protection: E

Revision/Preparer Information

MSDS Preparer: GEORGE MARCINA
MSDS Preparer Phone Number: (562) 968-2980 ext 103
This MSDS Supersedes A Previous MSDS Dated: 11/03/2006

Disclaimer

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Disclaimer - Continued
CUSTOM BUILDING PRODUCTS

Printed Using MSDS Generator™ 2000

MATERIAL SAFETY DATA SHEET

POLYBLEND SANDED GROUT

HMIS

HEALTH	**1**
FLAMMABILITY	**0**
REACTIVITY	**0**
PERSONAL PROTECTION	**E**

1. Product And Company Identification

Supplier
CUSTOM BUILDING PRODUCTS
10400 Pioneer Blvd., Unit #3
Santa Fe Springs, CA 90670 UNITED STATES

Company Contact: GEORGE MARCINA
Telephone Number: (562) 968-2980 Ext 103
FAX Number: (562) 903-2697
E-Mail: georgem@cbpmail.net
Web Site: www.custombuildingproducts.com

Manufacturer
CUSTOM BUILDING PRODUCTS
10400 Pioneer Blvd., Unit #3
Santa Fe Springs, CA 90670 UNITED STATES

Company Contact: GEORGE MARCINA
Telephone Number: (562) 968-2980 Ext 103
FAX Number: (562) 903-2697
E-Mail: georgem@cbpmail.net
Web Site: www.custombuildingproducts.com

Supplier Emergency Contacts & Phone Number
GEORGE MARCINA: (562) 968-2980

Manufacturer Emergency Contacts & Phone Number
GEORGE MARCINA: (562) 968-2980

Issue Date: 11/03/2006

Product Name: POLYBLEND SANDED GROUT
Chemical Name: GROUTS
CAS Number: Not Established
Chemical Formula: Mixture
MSDS Number: 743
Product Code: All colors

2. Composition/Information On Ingredients

Ingredient Name	CAS Number		Percent Of Total Weight
Iron Oxide Pigments	1317-61-9		0 - 5
Titanium Dioxide	13463-67-7		0 - 5
Portland Cement	65997-15-1		25 - 35
Silca Sand, Quartz, Crystalline	14808-60-7		55 - 65

3. Hazards Identification

Primary Routes(s) Of Entry
Inhalation, Skin Contact, Eye Contact, Ingestion

Eye Hazards
Irritant, severe eye irritation. May cause eye injury. Effects may be delayed.

Skin Hazards
Contains Portland cement and exposure to dry Portland cement may cause drying of skin with consequent mild irritation. Prolonged contact with wet Portland cement may cause severe, potentially irreversible damage to the skin in the form of chemical (caustic) burns.

3. Hazards Identification - Continued

Ingestion Hazards

Ingestion is not known to be harmful, however the product contains Portland cement which is caustic to mucus tissue and should not be consumed.

Inhalation Hazards

Causes respiratory tract irritation. May cause nose, throat, and lung irritation. May cause delayed lung injury.

Chronic/Carcinogenicity Effects

CONTAINS SILICA SAND, KNOWN HUMAN CARCINOGEN. MAY CONTAIN OTHER CHEMICALS ON CA PROPOSITION 65 LIST.

4. First Aid Measures

Eye

In case of contact, hold eyelids apart and immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately if irritation develops and persists.

Skin

In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Get medical attention immediately if irritation (redness, rash, blistering) develops and persists.

Ingestion

DO NOT INDUCE VOMITING. If victim is fully conscious, give one or two cups of water or milk to drink. Get medical attention immediately.

Inhalation

If inhaled, remove to fresh air. Consult a physician immediately if irritation persists. Do not give an unconscious person anything to drink.

5. Fire Fighting Measures

Flash Point: N/A °F
Flash Point Method: N/A
Lower Explosive Limit: N/A
Upper Explosive Limit: N/A

6. Accidental Release Measures

Avoid generating dust. Sweep up and remove immediately. Use appropriate personal protective equipment (PPE). OBSERVE ALL FEDERAL, STATE AND LOCAL REGULATIONS REGARDING NOTIFICATIONS OF ACCIDENTAL RELEASES.

7. Handling And Storage

Handling And Storage Precautions

Use only with adequate ventilation.

Handling Precautions

Avoid creating dust. Avoid breathing dust. Avoid contact with skin and clothing. Avoid contact with eyes.

Storage Precautions

Keep dry until ready to use.

Work/Hygienic Practices

Use good personal hygiene. Wash thoroughly with soap and water after handling.

8. Exposure Controls/Personal Protection

No Data Available...

8. Exposure Controls/Personal Protection - Continued

Engineering Controls

Use with adequate ventilation.

Eye/Face Protection

Safety glasses with side shields or goggles recommended.

Skin Protection

If hands or feet will be exposed, wear impervious gloves and/or boots.

Respiratory Protection

In case of inadequate ventilation and when exposed to dust above the recommended limits, wear a suitable NIOSH-approved respirator.

Ingredient(s) - Exposure Limits

Titanium Dioxide
- ACGIH TLV-TWA 10 mg/m3
- OSHA PEL-TWA 15 mg/m3

Portland Cement
- OSHA - PEL - 5mg/m3
- OSHA - PEL - TWA - 50mppcf
- ACGIH - TLV - 10mg/m3

Silca Sand, Quartz, Crystalline
- ACGIH TLV-TWA 0.05 mg/m3
- OSHA PEL-TWA 30/%SiO2+2mg/m3
- OSHA PEL - TWA 10/% SiO2 +2 mg/m3
- OSHA PEL-TWA 250/%SiO+5 mppcf
- Cal EPA - OEHHA - REL - 3 micrograms/m3

9. Physical And Chemical Properties

Appearance

Free flowing powder.

Chemical Type: Mixture
Physical State: Solid
Melting Point: NA °F
Boiling Point: N/A °F
Specific Gravity: 2.7
Vapor Density: N/A
Solubility: MINIMAL
Evaporation Rate: N/A

10. Stability And Reactivity

Stability: STABLE
Hazardous Polymerization: WILL NOT OCCUR.

Conditions To Avoid (Stability)

Avoid unintentional contact with water.

Incompatible Materials

Contains Portland cement which, when wet, is highly alkali. As a result, it is incompatible with acids, ammonium salts, aluminum and other alkali and alkaline earth metals.

11. Toxicological Information

No Data Available...

11. Toxicological Information - Continued

Chronic/Carcinogenicity

CONTAINS SILICA SAND, KNOWN HUMAN CARCINOGEN. MAY CONTAIN OTHER CHEMICALS ON CA PROPOSITION 65 LIST.

Ingredient(s) - Carcinogenicity

Silca Sand, Quartz, Crystalline
- NTP - Listed On The National Toxicology Program
- Listed In The IARC Monographs

12. Ecological Information

No Data Available...

13. Disposal Considerations

Dispose in accordance with applicable federal, state and local government regulations.

RCRA Information

Not considered RCRA Hazardous Waste.

14. Transport Information

DOT Shipping Label

NOT REGULATED

15. Regulatory Information

SARA Section 313 Notification

This product does not contains toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.

Ingredient(s) - State Regulations

Titanium Dioxide
- New Jersey - Workplace Hazard
- Pennsylvania - Workplace Hazard
- New York City - Hazardous Substance

Portland Cement
- New Jersey - Workplace Hazard
- Pennsylvania - Workplace Hazard

Silca Sand, Quartz, Crystalline
- New Jersey - Workplace Hazard
- Pennsylvania - Workplace Hazard
- California - Proposition 65
- Massachusetts - Hazardous Substance

16. Other Information

HMIS Rating

Health: 1
Fire: 0
Reactivity: 0
Personal Protection: E

Revision/Preparer Information

MSDS Preparer: GEORGE MARCINA
MSDS Preparer Phone Number: (562) 968-2980 ext 103
This MSDS Supersedes A Previous MSDS Dated: 11/03/2006

Disclaimer

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CUSTOM BUILDING PRODUCTS

Printed Using MSDS Generator™ 2000

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 405.90

Revision Date: February 6, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PolySnow™

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **N/A**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium polyacrylate Synonym: Aqua keep BA40	9033-79-8	$(C_3H_3O_2Na)_n$	Varies	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up the spill, place in a sealed bag or container, and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #3. Store with hydrocarbons, oils, esters and aldehydes.
Moisture sensitive. Swells in water.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Fine white powder. Odorless.
Soluble: Swells in water.

Specific gravity: 1.5

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizing agents.
Shelf life: Good, if kept dry.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritating dust.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 40000 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: February 6, 2014

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FLINN SCIENTIFIC INC.

"Your Safer Source for Science Supplies"

Material Safety Data Sheet (MSDS)

MSDS #: 608.10
Revision Date: March 12, 2001

Section 1 — Chemical Product and Company Identification

Polyvinyl Alcohol Solution

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Section 2 — Composition, Information on Ingredients

Polyvinyl Alcohol (9002-89-5) 4%, and Water (7732-18-5) 96%.

CAS#: 9002-89-5 (P0153, P0154, P0203)

Section 3 — Hazards Identification

Colorless, viscous liquid. Odorless.
Substance not considered hazardous. However, not all health aspects of this substance have been thoroughly investigated.

FLINN AT-A-GLANCE
Health-0
Flammability-0
Reactivity-0
Exposure-0
Storage-0

0 is low hazard, 3 is high hazard

Section 4 — First Aid Measures

Call a physician, seek medical attention for further treatment, observation and support after first aid.
Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.
Eye: Immediately flush with fresh water for 15 minutes.
External: Wash continuously with fresh water for 15 minutes.
Internal: Give large quantities of water. Call a physician or poison control at once.

Section 5 — Fire Fighting Measures

Non combustible liquid.

NFPA CODE
None established

Section 6 — Accidental Release Measures

Restrict unprotected personnel from area and ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

Section 7 — Handling and Storage

Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, amines and amides.

Section 8 — Exposure Controls , Personal Protection

Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, chemical-resistant gloves and chemical-resistant apron.

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Section 9 — Physical and Chemical Properties

Translucent, viscous liquid. Odorless.

Section 10 — Stability and Reactivity

Shelf Life: Indefinite.

Section 11 — Toxicological Information

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD50: N.A.
IHL-RAT LC50: N.A.
SKN-RBT LD50: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

Section 12 — Ecological Information

Data not yet available.

Section 13 — Disposal Considerations

Please consult with state and local regulations.
Flinn Suggested Disposal Method #26b is one option.

Section 14 — Transport Information

Shipping Name: Not regulated
Hazard Class: N/A
UN Number: N/A

N/A = Not applicable

Section 15 — Regulatory Information

Not listed.

Section 16 — Other Information

Consult your copy of the Flinn Scientific Catalog/Reference Manual for additional information about laboratory chemicals. This Material Safety Data Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. Flinn Scientific Inc. assumes no legal responsibility for use or reliance upon this data.

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Reduce Science Accidents--
Use Flinn Chemicals

flinn@flinnsci.com www.flinnsci.com
P.O. Box 219 Batavia IL 60510
(800) 452-1261 Fax (866) 452-1436

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 608.00

Revision Date: March 25, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Polyvinyl Alcohol

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **N/A**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Polyvinyl alcohol	9002-89-5	$[CH_2CH(OH)]_n$	Varies	
Synonym: PVA				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Combustible solid.
Flash point: 79 °C
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
H-0
F-2
R-0

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, amines and amides.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White to cream colored powder. Odorless.
Synthetic polymer.

Decomposes at 200 ^{o}C
Specific gravity: 1.27 - 1.31

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 23,854 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 25, 2014

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8267-xx, 8268-xx ✓

02908- all Codes
except
-0003
-0004
-1000
-1103
-1773

72090-0000

Date de révision : 20/08/02
Date d'impression : 02/10/03
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SAFETY DATA SHEET

1 - IDENTIFICATION OF PREPARATION AND COMPANY/BUSINESS

Preparation:

Name: PORCELAINE 150 ALL COLORS.
Product code

Company/business:

Registered company name: PEBEO INDUSTRIES.
Address: 305 AVENUE DU PIC DE BERTAGNE - BP106 -.13881.GEMENOS CEDEX.FRANCE.
Telephone: 33 (0) 4.42.32.08.08. Fax:33 (0) 4.42.32.01.70. Telex:.
Emergency telephone No.: 33 (0) 1.45.45.67.67.
Association/Organisation: INRS.

Normal use:

waterbased paint for china , oven-bake

2 - INFORMATION REGARDING CONSTITUENTS

Hazardous substances present on their own.

(present in the preparation at a sufficient concentration to give it the toxicological characteristics it would have in a 100% pure state)
This preparation contains no hazardous substance in this category.

Other substances representing a hazard:

No known substance in this category present.

Substances present at a concentration below the minimum danger threshold.

No known substance in this category present.

Other substances with occupational exposure limits.

No known substance in this category present.

3 - IDENTIFICATION OF HAZARDS

This product is not classed as flammable. Refer to the recommendations regarding the other products present on the site
This preparation is not classed as hazardous to health by directive 1999/45/EC.

Other data:

Packaging < 125 ml.

4 - FIRST AID.

As a general rule, in case of doubt or if symptoms persist, always call a doctor.
NEVER induce swallowing in an unconscious person.

In the event of splashes or contact with eyes.

Remove contact lenses, irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart and seek medical advice.

In the event of splashes or contact with skin.

Wash skin thorougly with soap and water.

In the event of swallowing.

If accidently swallowed obatin immediate medical attention.Keep at rest.Do not induce vomiting.

5 - FIRE-FIGHTING MEASURES

Not relevant.

6 - MEASURES TO BE TAKEN IN THE EVENT OF ACCIDENTAL SPILLAGE

Safety precautions:

Consult the safety measures listed under headings 7 and 8.

Environmental safety precautions:

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatom earth in drums for waste disposal.
Prevent any material from entering drains or waterways.

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Cleaning methods:

Clean preferably with a detergent, do not use solvents.

7 - HANDLING AND STORAGE

The regulations relating to storage premises apply to workshops where the product is handled.

Handling:

No recommendations.

Fire prevention:

Prevent access by unauthorised personnel.

Storage.

avoid metalic can
keep away from frost

8 - EXPOSURE CONTROL - PERSONAL SAFETY

Technical measures.

Personnel shall wear regularly laundered overalls.

Exposure limits per INRS ND 2098-174-99 and ND 2114-176-99:

Substance in this category unknown.

Exposure limits per 2000/39/EC and 98/24/EC:

Substance in this category unknown.

9 - PHYSICAL PROPERTIES

Density:	> 1
Acid/base character of preparation:	slightly basic.
Solubility of preparation in water:	Dilutable.
Vapour tension at 50°C of volatile constituents:	not specified.
Physical state:	fluid liquid
Flash point interval:	not relevant.
When a pH measure is possible, it has a value of:	8.00 .
Self-ignition temperature:	not relevant.
Decomposition temperature:	not specified.
Melting temperature interval:	not relevant.
Average distillation temperature of solvents contained:	not relevant.

10 - STABILITY AND REACTIVITY

The preparation is stable at the handling and storage conditions recommended per § 7 of the safety data sheet.

11 - TOXICOLOGICAL INFORMATION

The preparation contains no substance classed as hazardous per directive 67/548/EEC.

12 - ECOLOGICAL INFORMATION

No ecological data on the product itself is available.

13 - DISPOSAL CONSIDERATIONS

Do not pour into drains or waterways.

Codes of wastes (Directive 75/442/EEC, Directive 91/689/EEC on hazardous waste) :

08 01 11 * waste paint and varnish containing organic solvents or other dangerous substances

14 - TRANSPORT INFORMATION

Exempt from transport classification and labelling.

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport

15 - STATUTORY INFORMATION

This preparation was classified in compliance with the directive known as <All preparations> 1999/45/EC and its adaptations

In addition directive 2001/59/EC with the 28° adaptation of directive 67/548/EC (Hazardous substances) have been taken into account.

Packaging < 125 ml.

Date de révision : 20/08/02
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16 - OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The product must not be used for any purposes other than those specified under heading 1 without first obtaining written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information given on this safety data sheet must be regarded as a description of the safety requirements relating to our product and not a guarantee of its properties

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 611.00

Revision Date: January 16, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Potassium Acetate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium acetate	127-08-2	$KC_2H_3O_2$	98.15	
Synonym: Acetic acid, potassium salt				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Deliquescent. Store in a cool, dry place within a Flinn Chem-Saf™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White crystals, powder or flakes. Slight vinegar odor.
Soluble: Water and alcohol

Melting point: 292 ^{o}C
Specific gravity: 1.57

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers.
Shelf life: Poor, deliquescent. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 3250 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (204-822-2).

SECTION 16 — OTHER INFORMATION

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Revision Date: January 16, 2014

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Potassium Acid Phthalate

MSDS Number: P5521 * * * * * Effective Date: 11/21/08 * * * * * Supercedes: 01/09/06

POTASSIUM ACID PHTHALATE

1. Product Identification

Synonyms: 1,2-Benzenedicarboxylic acid monopotassium salt; potassium biphthalate; potassium hydrogen phthalate; Phthalic acid, potassium salt
CAS No.: ç
Molecular Weight: 204.23
Chemical Formula: HOOC-C6H4COOK
Product Codes:
J.T. Baker: 2958, 4889
Mallinckrodt: 6704

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Potassium Acid Phthalate	877-24-7	100%	Yes

3. Hazards Identification

Emergency Overview

CAUTION! MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.

SAF-T-DATA(tm) Ratings (Provided here for your convenience)

Health Rating: 0 - None
Flammability Rating: 1 - Slight
Reactivity Rating: 0 - None
Contact Rating: 1 - Slight
Lab Protective Equip: GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES
Storage Color Code: Green (General Storage)

Potential Health Effects

Information on the human health effects from exposure to this substance is limited.

Inhalation:
May cause irritation to respiratory tract because of slight acidity. Symptoms may include coughing and sore throat.
Ingestion:
Large doses may produce nausea, vomiting, and abnormal sensations in hands and feet. Because of slight acidity, causes irritation to the mucous membranes.
Skin Contact:
Contact may cause irritation, with redness and pain.
Eye Contact:
May cause eye irritation.
Chronic Exposure:
No information found.
Aggravation of Pre-existing Conditions:
No information found.

---

4. First Aid Measures
Inhalation:
Remove to fresh air. Get medical attention for any breathing difficulty.
Ingestion:
Give large amounts of water to drink. Never give anything by mouth to an unconscious person. Get medical attention.
Skin Contact:
Immediately flush skin with plenty of water for at least 15 minutes. Call a physician if irritation develops.
Eye Contact:
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Call a physician if irritation persists.

---

5. Fire Fighting Measures

Fire:
As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source.
Explosion:
Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Fire Extinguishing Media:
Water spray, dry chemical, alcohol foam, or carbon dioxide.
Special Information:
In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

---

6. Accidental Release Measures

Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container.

---

7. Handling and Storage

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

---

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:
None established.
Ventilation System:
A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.
Personal Respirators (NIOSH Approved):

For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.
Skin Protection:
Wear protective gloves and clean body-covering clothing.
Eye Protection:
Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

---

9. Physical and Chemical Properties
Appearance:
Colorless or white crystals.
Odor:
Odorless.
Solubility:
25g/100m1 cold water
Specific Gravity:
1.64
pH:
4.0 0.05M soln.:
% Volatiles by volume @ 21C (70F):
0
Boiling Point:
No information found.
Melting Point:
No information found.
Vapor Density (Air=1):
No information found.
Vapor Pressure (mm Hg):
No information found.
Evaporation Rate (BuAc=1):
No information found.

---

10. Stability and Reactivity
Stability:
Stable under ordinary conditions of use and storage.
Hazardous Decomposition Products:
Carbon dioxide and carbon monoxide may form when heated to decomposition.

Hazardous Polymerization:
Will not occur.
Incompatibilities:
Nitric Acid. Strong oxidizing agents.
Conditions to Avoid:
Heat, ignition sources and incompatibililites.

---

11. Toxicological Information

Oral rat LD50: >3200 mg/kg

--------\Cancer Lists\----------

Ingredient	---NTP Carcinogen--- Known	Anticipated	IARC Category
Potassium Acid Phthalate (877-24-7)	No	No	None

---

12. Ecological Information

Environmental Fate:
No information found.
Environmental Toxicity:
No information found.

---

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

---

14. Transport Information

Not regulated.

---

15. Regulatory Information

--------\Chemical Inventory Status - Part 1\----------

Ingredient	TSCA	EC	Japan	Australia

Potassium Acid Phthalate

Potassium Acid Phthalate (877-24-7)	Yes	Yes	Yes	Yes

--------\Chemical Inventory Status - Part 2\----------

Ingredient	Korea	--Canada-- DSL	NDSL	Phil.
Potassium Acid Phthalate (877-24-7)	Yes	Yes	No	Yes

--------\Federal, State & International Regulations - Part 1\----------

Ingredient	-SARA 302- RQ	TPQ	------SARA 313------ List	Chemical Catg.
Potassium Acid Phthalate (877-24-7)	No	No	No	No

--------\Federal, State & International Regulations - Part 2\----------

Ingredient	CERCLA	-RCRA- 261.33	-TSCA- 8(d)
Potassium Acid Phthalate (877-24-7)	No	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
SARA 311/312: Acute: Yes Chronic: No Fire: No Pressure: No
Reactivity: No (Pure / Solid)

Australian Hazchem Code: None allocated.
Poison Schedule: None allocated.
WHMIS:
This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

---

16. Other Information
NFPA Ratings: Health: 1 Flammability: 1 Reactivity: 0
Label Hazard Warning:
CAUTION! MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.
Label Precautions:
Avoid breathing dust.
Avoid contact with eyes, skin and clothing.
Keep container closed.

Wash thoroughly after handling.
Use with adequate ventilation.
Label First Aid:
In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes. Call a physician if irritation develops or persists. If inhaled, remove to fresh air. Get medical attention for any breathing difficulty.
Product Use:
Laboratory Reagent.
Revision Information:
No Changes.
Disclaimer:
****
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****
Prepared by: Environmental Health & Safety
Phone Number: (314) 654-1600 (U.S.A.)

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 612.00

Revision Date: January 16, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Potassium Bicarbonate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **N/A**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium bicarbonate	298-14-6	$KHCO_3$	100.12	
Synonym: Potassium hydrogen carbonate				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates.
Hygroscopic. Store in a cool, dry place within a Flinn Chem-Saf™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White granular crystals or powder. Odorless.
Soluble: Water. Insoluble in alcohol.

Melting point: 100-120 ^{o}C (decomposes)
Specific gravity: 2.17

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers and acids.
Shelf life: Poor, hygroscopic. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (206-059-0).

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: January 16, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 613.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

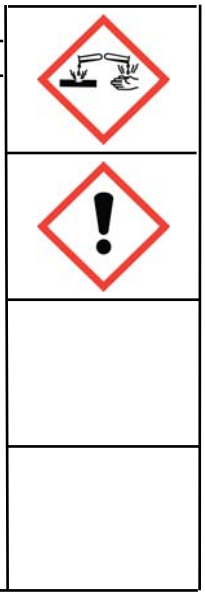
Potassium Bisulfate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin corrosion or irritation (Category 1). Causes severe skin burns and eye damage (H314).

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

Hazard class: Specific target organ toxicity, single exposure; Respiratory tract irritation (Category 3). May cause respiratory irritation (H335). Avoid breathing dust or fumes (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium bisulfate	7646-93-7	$KHSO_4$	136.17	
Synonym: Potassium hydrogen sulfate				

SECTION 4 — FIRST AID MEASURES

Immediately call a POISON CENTER or physician (P310).
If inhaled: Remove victim to fresh air in a position comfortable for breathing (P304+P340). **If in eyes:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338).
If on skin: Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353). Wash contaminated clothing before reuse (P363).
If swallowed: Rinse mouth. Do NOT induce vomiting (P301+P330+P331).

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Deliquescent. Store in a cool, dry place within a Flinn Chem-Saf™ bag. Keep container tightly closed (P233). Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless crystal. Odor of peanut brittle.
Soluble: Water. Decomposes in alcohol.

Melting point: 214 ^{o}C
Specific gravity: 2.245

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong bases and strong oxidizers.
Shelf life: Poor, deliquescent. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Corrosive
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 2340 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-594-1).

SECTION 16 — OTHER INFORMATION

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Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 614.00

Revision Date: January 16, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Potassium Bitartrate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **N/A**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

Product should be treated as a chemical and is not for consumption as it has been stored with other nonfood-grade chemicals.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium bitartrate	868-14-4	$KHC_4H_4O_6$	188.18	
Synonyms: Potassium hydrogen tartrate; Cream of tartar; Potassium acid tartrate				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White crystals or powder. Odorless.
Soluble: Boiling water. Insoluble in alcohol.

Specific gravity: 1.984

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (212-769-1).

SECTION 16 — OTHER INFORMATION

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 616.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Potassium Bromide

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

Hazard class: Specific target organ toxicity, single exposure; Respiratory tract irritation (Category 3). May cause respiratory irritation (H335). Avoid breathing dust or fumes (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium bromide	7758-02-3	KBr	119.02	

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313).
If inhaled: Remove victim to fresh air in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Rinse cautiously with water for several minutes (P351).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Hygroscopic. Store in a cool dry place within a Flinn Chem-Saf™ bag. Keep container tightly closed (P233). Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White crystalline powder. Odorless.
Soluble: Water. Slightly in alcohol.

Boiling point: 1380 ^{o}C
Melting point: 734 ^{o}C
Specific gravity: 2.750

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers, strong acids, heavy metal salts.
Shelf life: Fair, hygroscopic. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 3070 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-830-3).

SECTION 16 — OTHER INFORMATION

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Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 618.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Potassium Carbonate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 4). Harmful if swallowed (H302). Do not eat, drink or smoke when using this product (P270).

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

Hazard class: Specific target organ toxicity, single exposure; Respiratory tract irritation (Category 3). May cause respiratory irritation (H335). Avoid breathing dust or fumes (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium carbonate, anhydrous	584-08-7	K_2CO_3	138.21	
Synonyms: Potash; Carbonic acid, dipotassium salt				

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313).
If inhaled: Remove victim to fresh air in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Rinse cautiously with water for several minutes (P351).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates.
Hygroscopic. Store in a cool, dry place within a Flinn Chem-Saf™ bag. Keep container tightly closed (P233). Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White powder. Odorless.
Soluble: Water. Insoluble in alcohol.

Melting point: 891 ^{o}C
Specific gravity: 2.29

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers.
Shelf life: Poor, hygroscopic. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Severe irritant
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 1870 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (209-529-3).

SECTION 16 — OTHER INFORMATION

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Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 620.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

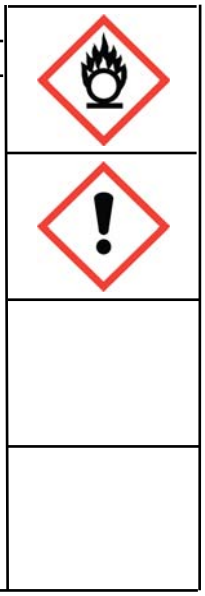
Potassium Chlorate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Oxidizing gases (Category 1). May cause or intensify fire; oxidizer (H270). Do not spray on an open flame or other ignition source (P211).

Hazard class: Acute toxicity, oral and inhalation (Category 4). Harmful if swallowed or inhaled (H302+H332). Do not eat, drink or smoke when using this product (P270). Avoid breathing dust or fumes (P261).

Hazard class: Skin corrosion or irritation (Category 3). Causes mild skin irritation (H316).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium chlorate	3811-04-9	$KClO_3$	122.56	
Synonym: Chloric acid, potassium salt				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If skin irritation occurs: Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid. Strong oxidizer. Forms explosive mixtures with combustible materials. If only slightly contaminated, will explode when exposed to moderate shock or when heated. When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
H-1
F-0
R-1
OX

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Restrict unprotected personnel from area. Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #6. Store with chlorates, bromates, iodates, chlorites, perchloric acid, and peroxides. Forms explosive mixtures with combustible materials. If only slightly contaminated, will explode when exposed to moderate shock or when heated. Keep container tightly closed. Keep and store away from clothing and combustible materials (P220). Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White crystals or powder. Odorless.
Soluble: Boiling water

Melting point: 368 ^{o}C
Specific gravity: 2.337

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with reducers, finely powdered metals, strong acids, alcohols, organic materials, and other combustible materials.
Shelf life: Indefinite, if stored safely. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant
Chronic effects: Anemia
Target organs: Blood, liver, kidneys

ORL-RAT LD_{50}: 1870 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #12a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Potassium Chlorate; Hazard class: 5.1, Oxidizer; UN number: UN1485

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (223-289-7), RCRA code D001, D003.

SECTION 16 — OTHER INFORMATION

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Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 621.00

Revision Date: January 16, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Potassium Chloride

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium chloride	7447-40-7	KCl	74.56	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Hygroscopic. Keep tightly closed and store in a Flinn Chem-Saf™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless or white crystals. Odorless.
Soluble: Water. Slightly in alcohol.

Melting point: 772 ^{o}C
Specific gravity: 1.987

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers, strong acids.
Shelf life: Poor, hygroscopic. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant
Chronic effects: N.A.
Target organs: stomach, blood

ORL-RAT LD_{50}: 2600 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-211-8).

SECTION 16 — OTHER INFORMATION

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Revision Date: January 16, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 623.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

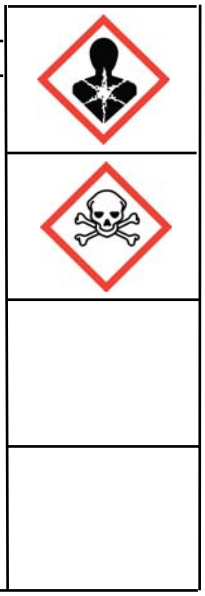
Potassium Chromate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 3). Toxic if swallowed (H301). Do not eat, drink or smoke when using this product (P270).
Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2). Causes skin and serious irritation (H315+H319).
Hazard class: Sensitization, skin (Category 1). May cause an allergic skin reaction (H317). Avoid breathing dust or fumes (P261).
Hazard class: Specific target organ toxicity, single exposure; respiratory tract irritation (Category 3). May cause respiratory irritation (H335).
Hazard class: Germ cell mutagenicity (Category 1A). May cause genetic defects (H340). Obtain special instructions before use (P201). Do not handle until all safety precautions have been read and understood (P202). Use personal protective equipment as required (P281).
Hazard class: Carcinogenicity (Category 1). May cause cancer (H350).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium chromate	7789-00-6	K_2CrO_4	194.21	
Synonym: Chromic acid, dipotassium salt				

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Wash with plenty of water (P302+P352). **If skin irritation occurs:** Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Immediately call a POISON CENTER or physician (P301+P310+P330).

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
Strong oxidizer: Fire hazard when in contact with combustible materials.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Restrict unprotected personnel from area. Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #8. Store with borates, chromates, manganates and permanganates.
Store in a cool dry place. Keep container tightly closed. Store in a Flinn Chem-Saf™ bag, and lock up in a poison cabinet.
Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).
Contaminated work clothing should not be allowed out of the workplace (P272). Use only in a hood or well-ventilated area (P271).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Yellow crystals. Odorless.
Soluble: Water. Insoluble in alcohol.

Melting point: 975 ^{o}C
Specific gravity: 2.7319

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with reducing agents, organic and other combustible materials.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Toxic, irritant, sensitizer
Chronic effects: Known carcinogen, mutagen
Target organs: Lungs, kidneys

ORL-MUS LD_{50}: 180 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #12a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (232-140-5), RCRA code D001, D007.

SECTION 16 — OTHER INFORMATION

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Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 627.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Potassium Dichromate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Oxidizing gases (Category 1). May cause or intensify fire; oxidizer (H270). Do not spray on an open flame or other ignition source (P211).
Hazard class: Acute toxicity, oral (Category 3). Toxic if swallowed (H301). Do not eat, drink or smoke when using this product (P270).
Hazard class: Acute toxicity, dermal (Category 4). Harmful in contact with skin (H312).
Hazard class: Skin corrosion or irritation (Category 1). Causes severe skin burns and eye damage (H314). Do not breathe dust or fumes (P260).
Hazard class: Acute toxicity, inhalation (Category 1). Fatal if inhaled (H330).
Hazard class: Germ cell mutagenicity (Category 1). May cause genetic defects (H340). Obtain special instructions before use (P201). Do not handle until all safety precautions have been read and understood (P202). Use personal protective equipment as required (P281).
Hazard class: Carcinogenicity (Category 1). May cause cancer (H350).
Hazard class: Reproductive toxicity (Category 1). May damage fertility or the unborn child (H360).
Hazard class: Specific target organ toxicity, repeated exposure (Category 1). Causes damage to organs (H372).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium dichromate	7778-50-9	$K_2Cr_2O_7$	294.22	
Synonym: Potassium bichromate				

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention IMMEDIATELY (P308+P313).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin (or hair): Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353).Wash contaminated clothing before reuse (P363).
If swallowed: Rinse mouth. Do NOT induce vomiting (P301+P330+P331).

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
Strong oxidizer. Dangerous fire risk when in contact with organic materials.
When heated to decomposition, may emit toxic fumes.
In case of fire: Stop leak if safe to do so (P370+P376). Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Restrict unprotected personnel from area. Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #8. Store with borates, chromates, manganates and permanganates.
Store in a cool dry place. Store in a locked poisons cabinet.
Keep and store away from clothing and combustible materials (P220). Use only in a hood or in a well-ventilated area.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling (P264). Use only in a hood or in a well-ventilated area. Wear respiratory protection (P284).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Orange crystalline powder. Odorless.
Soluble: Water. Insoluble in alcohol.

Melting point: 396 ^{o}C
Specific gravity: 2.676

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with reducers and organic materials.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Poison, corrosive, sensitizer
Chronic effects: Known carcinogen, mutagen
Target organs: Lungs, kidneys

ORL-MUS LD_{50}: 190 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #12a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Oxidizing solid, N.O.S.; Hazard class: 5.1, Oxidizer; UN number: UN1479

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-906-6), RCRA code D001, D007.

SECTION 16 — OTHER INFORMATION

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Revision Date: March 21, 2014

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Material Safety Data Sheet (MSDS)

MSDS #: 631.10

Revision Date: February 24, 2003

Section 1 — Chemical Product and Company Identification

Potassium Ferrocyanide Solution

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Section 2 — Composition, Information on Ingredients

Potassium Ferrocyanide (14459-95-1) 4%, and Water (7732-18-5) 96%.

CAS#: None Established

Section 3 — Hazards Identification

Lemon-yellow liquid. Odorless.
Substance not considered hazardous. However, not all health aspects of this substance have been thoroughly investigated.
On contact with acids it emits very toxic fumes of HCN.

FLINN AT-A-GLANCE

Health-0
Flammability-0
Reactivity-1
Exposure-0
Storage-0

0 is low hazard, 3 is high hazard

Section 4 — First Aid Measures

Call a physician, seek medical attention for further treatment, observation and support after first aid.
Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.
Eye: Immediately flush with fresh water for 15 minutes.
External: Wash continuously with fresh water for 15 minutes.
Internal: Give large quantities of water. Call a physician or poison control at once.

Section 5 — Fire Fighting Measures

Non-flammable liquid.

NFPA CODE

None Established

Section 6 — Accidental Release Measures

Restrict unprotected personnel from area and ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

Section 7 — Handling and Storage

Flinn Suggested Chemical Storage Pattern: Inorganic #7. Store with arsenates, cyanides and cyanates.
Store in a cool dry place; material effloresces on exposure to air.

Section 8 — Exposure Controls, Personal Protection

Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, chemical-resistant gloves and chemical-resistant apron.

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Section 9 — Physical and Chemical Properties

Lemon-yellow liquid. Odorless.
Formula: K4Fe(CN)6 3H2O
Formula Weight: 422.41

Section 10 — Stability and Reactivity

If heated or in contact with concentrated acids, substance emits poisonous HCN gas. Avoid contact with strong acids, strong oxidizers, nitrate and nitrite salts, ammonia or sodium chromate.
Shelf life: Indefinite.

Section 11 — Toxicological Information

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD50: N.A.
IHL-RAT LC50: N.A.
SKN-RBT LD50: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

Section 12 — Ecological Information

Data not yet available.

Section 13 — Disposal Considerations

Please consult with state and local regulations.
Flinn Suggested Disposal Method #14 is one option.

Section 14 — Transport Information

Shipping Name: Not regulated
Hazard Class: N/A
UN Number: N/A

N/A = Not applicable

Section 15 — Regulatory Information

TSCA-listed, EINECS-listed (237-722-2).

Section 16 — Other Information

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P.O. Box 219 Batavia IL 60510
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MATERIAL SAFETY DATA SHEET

ScholAR Chemistry™

5100 W. Henrietta Rd.
West Henrietta, NY 14586
TEL: (866) 260-0501

MSDS No. 9422804
9422904 9422906
Effective Date: October 28, 2002

SECTION I NAME

Product	Potassium Ferrocyanide
Chemical Synonyms	Yellow Prussiate of Potash
Formula	$K_4Fe(CN)_6 \cdot 3H_2O$
CAS No.	14459-95-1

24 HOUR EMERGENCY ASSISTANCE

416-984-3000

NFPA

Health	1
Flammability	0
Reactivity	1

HAZARD RATING **WHMIS**

LEAST	SLIGHT	MODERATE	HIGH	EXTREME
0	1	2	3	4

SECTION II DANGEROUS INGREDIENTS

Name	%	TLV Units
Potassium ferrocyanide, trihydrate	100%	N/A
WARNING!		

SECTION III PHYSICAL DATA

Melting Point (°C)	Loses water > 70°C	Specific Gravity (H_2O = 1)	1.853 @ 17°C
Boiling Point (°C)	Decomposes > 400°C	Percent Volatile by Volume (%)	N/A
Vapor Pressure (mm Hg)	N/A	Evaporation Rate (n-Butyl acetate =1)	N/A
Vapor Density (Air=1)	N/A		
Solubility in Water	28 g/100ml water @ 20°C		
Appearance & Odor	Yellow crystalline powder; no odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash point	Not flammable.	Flammable Limits in Air % by Volume	Lower	Upper
		N/A		

Firefighting Procedures

Use dry chemical, CO_2, alcohol foam, or water spray. In fire conditions, fire-fighters should wear an appropriate mask or a self-containing breathing apparatus.

Flammability and Explosion Hazards

Emits highly toxic fumes or hydrogen cyanide gas which can form explosive mixture with air.

TDG **Not a TDG controlled material.**

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SECTION V REACTIVITY DATA

PP0550

Chemical Stability	Yes	X	If no, under what conditions?
	No		
Incompatible with Other products	Yes	X	Strong oxidizers, strong acides or acid fumes.
	No		
Hazardous Decomposition Products	Cyanide fumes and nitrogen oxides.		
Reactive under what conditions	Protect from light, heat, strong acid or acid fumes.		

SECTION VI TOXICOLOGICAL PROPERTIES

Route of Entry	Inhalation. Ingestion.
TLV	Not available.
Toxicity for animals	Oral-rat: LD50: 3616 mg/kg.
Chronic effects on humans	There are no known effects from chronic exposure to this product. Target organs: None known.
Acute effects on humans	May be harmful if inhaled or swallowed. Contact may cause irritation to the skin and eyes.

SECTION VII PREVENTIVE MEASURES

Waste Disposal	Discharge, treatment, or disposal may be subject to local laws. Consult your local or regional authorities.
Storage	Keep container dry. Keep container tightly closed. Keep away from incompatible materials.
Precautions	Do not ingest. Do not breathe dust. Avoid contact with skin and eyes. Protect from light.
Spill or leak	Use appropriate tools to put the spilled solid in a convenient waste disposal container. Wash spill area with soap and water.
Protective Clothing	Gloves, safety glasses, lab coat, dust respirator.

SECTION VIII FIRST AID MEASURES

Specific first aid measures

Ingestion: Call physician or Poison Control Center immediately. Induce vomiting only if advised by the appropriate medical personnel. Eye contact: Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek medical attention. Skin contact: Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Inhalation: Move victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Allow victim to rest in a well ventilated area. Seek immediate medical attention.

SECTION IX PREPARATION OF THE MSDS

Rev. No.	2	Date	October 28, 2002	Approved	Michael Raszeja

Fiche Signalétique

ScholAR Chemistry™

5100 W. Henrietta Rd.
West Henrietta, NY 14586
TEL: (866) 260-0501

MSDS 9422804
9422904 9422906
Validé par: 28 octobre, 2002

SECTION I Identification

Produit	Ferrocyanure de potassium
Synonymes	Jaune prussiate de potash
Formule	$K_4Fe(CN)_6 \cdot 3H_2O$
# CAS	14459-95-1

Telephone D'urgence

416-984-3000

NFPA

Santé	1
Flammabilité	0
Reactivité	1

Niveau de risque

Minime	Légere	Modéré	Serieux	Extréme
0	1	2	3	4

WHMIS

SECTION II Ingrédients Dangereux

Nom	%	TWA
Ferrocyanure de potassium, trihydrate	100%	Sans objet.
AVERTISSEMENT!		

SECTION III Caractéristiques Physiques

Point de fusion (°C)	Perdre l'eau > 70°C	Gravité spécifique (Eau = 1)	1,853 @ 17°C
Point d'ebullition (°C)	Se décomposes > 400°C	Volatilité % par volume	Sans objet.
Tension de vapeur (mm Hg)	Sans objet.	Taux d'évaporation (Acetate de n-butyl =1)	Sans objet.
Densité de la vapeur (Air=1)	Sans objet.		
Solubilité	28 g/100ml l'eau @ 20°C		
Odeur et apparence	Poudre cristallin jaune; sans odeur.		

SECTION IV Risques D'incendie ou D'explosion

			Seuil minimal	Seuil maximal
Point d'éclair	Ininflammable.	Limites d'inflmmabilité % par volume Sans objet.		

Moyens d'extinction

Utiliser des poudres chimiques sèches, du CO_2, une mousse d'alcool ou de l'eau pulvérisée. En cas de feu, sapeur-pompeir devra porter en masque adéquate ou un respirateur autonome.

Inflammabilité et risques d'explosion

Émet fumées extrêmement des toxique de gaz de cyanide d'hydrogène qui peut former le mélange explosif avec l'air.

TMD **Substance non réglementée par le TMD.**

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SECTION V Données sur la Réactivité

PP0550

Chimique Stabilité	oui	X	Si non, dans quelles condition?
	non		
Incompatibilité avec d'autres produits	oui	X	Comburante forte, l'acides forte et des fumées d'acides.
	non		
Produits de decomposition dangereux	Les fumées de cyanure et l'oxydes d'azote.		
Conditions de Réactivité	Protéger de la lumière, de la chaleur, l'acides forte et des fumées d'acides.		

SECTION VI Propriétés Toxicologiques

Voies d'absorption	Inhalation. Ingestion.
LMP	N'est pas à notre disposition.
Toxicité pour les animaux	Oral-rat: LD50: 3616 mg/kg.
Effets chroniques sur les humains	Il n'y a aucun effet connu dû exposition chronique à ce produit. On ne connaît aucun organe de cible.
Effets aigué sur les humains	Peut être nuisible en cas d'inhalation ou en cas d'ingestion. Le contact peut causer une irritation de la peau et des yeux.

SECTION VII Mesures Préventives

Élimination des résidus	Consulter vos autorités locales ou régionales.
Entreposage	Conserver le récipient à l'abri de l'humidité. Garder le récipient bien fermé. Tenir à l'écart des matières incompatibles.
Précautions	Ne pas ingérer. Ne pas inhaler les poussières. Éviter tout contact avec la peau et les yeux. Protéger de la lumière.
Déversement ou fuite	Utiliser les instruments nécessaires pour mettre le solide répandu dans un contenant de récuperation approprié. Bien laver la surface où le solide était répandu avec du savon et de l'eau.
Vêtements de protection	Gants, lunettes de sécurité, blousse de laboratoire, respirateur anti-poussières.

SECTION VIII Premiers Soins

Premier Soins Particuliers à Administrer

Ingestion: Consulter une médecin ou le centre de poison commande immédiatement. Induisez le vomissement seulement s'informé par le personnel médical approprié. Contact oculaire: Vérifer si la victime porte des verres de contact et dans ce cas lui les enlever. Rincer les yeux immèdiatement à l'eau courante pendant au moins 15 minutes en gardant les paupiéres ouvertes. Obtenir de l'aide médicale. Contact cutane: Laver doucement et entièrement la peau contaminée à l'eau courante avec un savon doux et non-abrasif. Inhalation: Sortir la victime à l'air frais. Si elle ne respire plus il faut lui donner de la respiration artificielle. Si la respiration est difficile, donnez l'oxygène. Assurez-vous que la victime se repose dans un endroit bien aéré. Obtenir immédiatement de l'aide médicale.

SECTION IX Renseignements sur la Préparation de la FS

# Rev.	2	Date	28 octobre, 2002	Vérifié par	Michael Raszeja

MATERIAL SAFETY DATA SHEET

ScholAR Chemistry™

5100 W. Henrietta Rd.
West Henrietta, NY 14586
TEL: (866) 260-0501

MSDS No. 9613406
Effective Date: January 23, 2003

SECTION I NAME

24 HOUR EMERGENCY ASSISTANCE

416-984-3000

Product	Potassium Fluoride
Chemical Synonyms	N/A
Formula	KF
CAS No.	7789-23-3

NFPA

Health	3
Flammability	0
Reactivity	1

HAZARD RATING **WHMIS**

LEAST	SLIGHT	MODERATE	HIGH	EXTREME
0	1	2	3	4

SECTION II DANGEROUS INGREDIENTS

Name	%	TLV Units
Potassium fluoride	100%	TWA: 2.5 Mg/m^3
DANGER! POISON!		

SECTION III PHYSICAL DATA

Melting Point (°C)	859°C	Specific Gravity (H_2O = 1)	2.481
Boiling Point (°C)	1505°C	Percent Volatile by Volume (%)	N/A
Vapor Pressure (mm Hg)	N/A	Evaporation Rate (=1)	N/A
Vapor Density (Air=1)	N/A		
Solubility in Water	92.3 g / 100 mL @ 18°C		
Appearance & Odor	White crystalline powder; no odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

			Lower	Upper
Flash point	Non-flammable.	Flammable Limits in Air % by Volume N/A		

Firefighting Procedures

Use dry chemical, CO_2, alcohol foam, or water spray. In fire conditions, fire-fighters should wear an appropriate mask or a self-containing breathing apparatus.

Flammability and Explosion Hazards

Fire or excessive heat may produce hazardous decomposition products to be produced as dust or fume. When dissolved in water, toxic and corrosive hydrofluoric acid is formed.

TDG **Class 6.1 Poisonous material. UN1812**

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SECTION V REACTIVITY DATA

PP0563

Chemical Stability	Yes	X	If no, under what conditions?
	No		
Incompatible with Other products	Yes	X	Strong acids.
	No		
Hazardous Decomposition Products	Flouride vapors.		
Reactive under what conditions	Reacts with acids to form corrosive and toxic hydrogen fluoride. Reacts with water to form toxic and corrosive hydrofluoric acid.		

SECTION VI TOXICOLOGICAL PROPERTIES

Route of Entry	Ingestion. Inhalation.
TLV	TWA: 2.5 mg/m^3
Toxicity for animals	N/A
Chronic effects on humans	Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many organs. Target organs: None known.
Acute effects on humans	Causes burns to eyes. Causes skin irritation. Can be fatal if inhaled or ingested.

SECTION VII PREVENTIVE MEASURES

Waste Disposal	Discharge, treatment, or disposal may be subject to local laws. Consult your local or regional authorities.
Storage	Keep container dry. Keep in a cool place. Keep container tightly closed. Keep away from acids and acid fumes.
Precautions	Avoid contact with skin and eyes. Causes burns. DO NOT breathe dust. DO NOT ingest. If ingested, seek medical advice immediately.
Spill or leak	Use appropriate tools to put the spilled solid in a convenient waste disposal container.
Protective Clothing	Safety glasses. Lab coat. Dust respirator.

SECTION VIII FIRST AID MEASURES

Specific first aid measures

Ingestion: Call physician or Poison Control Center immediately. Induce vomiting only if advised by the appropriate medical personnel. Eye contact: Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek medical attention. Skin contact: Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Inhalation: Move victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Allow victim to rest in a well ventilated area. Seek immediate medical attention.

SECTION IX PREPARATION OF THE MSDS

Rev. No.	4	Date	January 23, 2003	Approved	Michael Raszeja

Fiche Signalétique

ScholAR Chemistry™

5100 W. Henrietta Rd.
West Henrietta, NY 14586
TEL: (866) 260-0501

MSDS 9613406
Validé par: 23 janvier, 2003

SECTION I Identification

Produit	Florure de potassium
Synonymes	Sans objet.
Formule	KF
# CAS	7789-23-3

Telephone D'urgence

416-984-3000

NFPA

Santé	3
Flammabilité	0
Reactivité	1

Niveau de risque

Minime	Légere	Modéré	Serieux	Extréme
0	1	2	3	4

WHMIS

SECTION II Ingrédients Dangereux

Nom	%	TWA
Florure de potassium	100%	TWA: 2.5 mg/m^3
DANGER! POISON!		

SECTION III Caractéristiques Physiques

Point de fusion (°C)	859°C	Gravité spécifique (Eau = 1)	2,481
Point d'ebullition (°C)	1505°C	Volatilité % par volume	Sans objet.
Tension de vapeur (mm Hg)	Sans objet.	Taux d'évaporation (=1)	Sans objet.
Densité de la vapeur (Air=1)	Sans objet.		
Solubilité	92.3 g / 100 mL @ 18°C		
Odeur et apparence	Poudre cristallin blanche; inodeur.		

SECTION IV Risques D'incendie ou D'explosion

			Seuil minimal	Seuil maximal
Point d'éclair	Ininflammable.	Limites d'inflmmabilité % par volume Sans objet.		

Moyens d'extinction

Utiliser des poudres chimiques sèches, du CO_2, une mousse d'alcool ou de l'eau pulvérisée. En cas de feu, sapeur-pompeir devra porter en masque adéquate ou un respirateur autonome.

Inflammabilité et risques d'explosion

Le feu ou la chaleur excessive peut produire les produits dangereux de décomposition à produire comme poussière ou vapeur. Une fois dissous dans l'eau, l'acide fluorhydrique toxique et corrosif est formé.

TMD **Classe 6.1 Substance toxique. UN1812**

Au meilleur de nos connaissances, l'information contenue dans ce document est exacte. Toutefois, ni le fournisseur ci-haut mentionné ni aucune de ses succursales ne peut assumer quelque responsabilité que ce soit en ce qui à trait à l'exactitude ou à l'état complet de l'information contenue dans ce document. La détermination finale de la convenance de tout matérial ou produit est la responsabilité exclusive de l'utilisateur. Tous les matériaux ou produits peuvent présenter certains risques et devraient être utilisés avec prudence. Bien que certains risques soient décrits dans ce document, nous ne pouvons garantir que ce sont les seuls risques qui existent.

SECTION V Données sur la Réactivité

PP0563

Chimique Stabilité	oui	X	Si non, dans quelles condition?
	non		
Incompatibilité avec d'autres produits	oui	X	Acides forte.
	non		

Produits de decomposition dangereux	Vapeurs de florure.
Conditions de Réactivité	Réagit avec des acides au fluorure corrosif et toxique de forme d'hydrogène. Réagit avec de l'eau à l'acide fluorhydrique toxique et corrosif de forme.

SECTION VI Propriétés Toxicologiques

Voies d'absorption	Ingestion. Inhalation.
LMP	TWA: 2,5 mg/m^3
Toxicité pour les animaux	Sans objet.
Effets chroniques sur les humains	L'exposition répétée à un produit hautement toxique peut entraîner une détérioration générale de l'état de santé due à une accumulation dans un ou plusiers des organes humains. On ne connaît aucun organe de cible.
Effets aigué sur les humains	Provoque des brûlures des yeux. Provoque une irritation de la peau. Peut être fatal si inhaler ou ingérer.

SECTION VII Mesures Préventives

Élimination des résidus	Consulter vos autorités locales ou régionales.
Entreposage	Conserver le récipient à l'abri de l'humidité. Conserver dans un endroit frais. Garder le récipient bien fermé. Tenir à l'écart de acides et les fumées d'acides.
Précautions	Éviter tout contact avec la peau et les yeux. Provoque de brûlures. NE PAS inhaler les poussiàres. NE PAS ingérer. En cas d'ingestion, consulter immédiatement un médecin.
Déversement ou fuite	Utiliser les instruments nécessaires pour mettre le solide répandu dans un contenant de récupération approprié.
Vêtements de protection	Lunettes de sécurité. Blouse de laboratoire. Respirateur anti-poussières.

SECTION VIII Premiers Soins

Premier Soins Particuliers à Administrer

Ingestion: Consulter une médecin ou le centre de poison commande immédiatement. Induisez le vomissement seulement s'informé par le personnel médical approprié. Contact oculaire: Vérifer si la victime porte des verres de contact et dans ce cas lui les enlever. Rincer les yeux immèdiatement à l'eau courante pendant au moins 15 minutes en gardant les paupiéres ouvertes. Obtenir de l'aide médicale. Contact cutane: Laver doucement et entièrement la peau contaminée à l'eau courante avec un savon doux et non-abrasif. Inhalation: Sortir la victime à l'air frais. Si elle ne respire plus il faut lui donner de la respiration artificielle. Si la respiration est difficile, donnez l'oxygène. Assurez-vous que la victime se repose dans un endroit bien aéré. Obtenir immédiatement de l'aide médicale.

SECTION IX Renseignements sur la Préparation de la FS

# Rev.	4	Date	23 janvier, 2003	Vérifié par	Michael Raszeja

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 633.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Potassium Hydrogen Phthalate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral and dermal (Category 5). May be harmful if swallowed or in contact with skin (H303+H313).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium hydrogen phthalate	877-24-7	$KHC_8H_4O_4$	204.23	
Synonym: Potassium acid phthalate; KHP				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Store in a cool dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless crystals. Odorless.
Soluble: Water

Melting point: 295 ^{o}C (decomposes)
pKa: 5.4
Specific gravity: 1.636

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritating dust
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LDL_0: >3200 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-GPIG LD_{50}: >1000 mg/kg

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #24a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (212-889-4).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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AQUA SOLUTIONS INC -- 326-0711, POTASSIUM HYDROXIDE SOLUTION, 15% (AQ) -- -

========== Product Identification ==========

Product ID:326-0711, POTASSIUM HYDROXIDE SOLUTION, 15% (AQ)
MSDS Date:06/01/1995
FSC:NIIN:Submitter:D DG
Status Code:A
Kit Part:Y
MSDS Number: CLCYJ
=== Responsible Party ===
Company Name:AQUA SOLUTIONS INC
Address:6913 HWY 225
Box:70
City:DEER PARK
State:TX
ZIP:77536
Country:US
Info Phone Num:713-479-2569/800-256-2586
Emergency Phone Num:713-479-2569 716-359-2502
Preparer's Name:R.M. CARLSON
Chemtrec Ind/Phone:(800)424-9300
CAGE:0KEJ9
=== Contractor Identification ===
Company Name:AQUA SOLUTIONS INC
Address:6913 HWY 225
Box:70
City:DEER PARK
State:TX
ZIP:77536
Country:US
Phone:713-479-2569
CAGE:0KEJ9
Company Name:WARDS NATURAL SCIENCE ESTABLISHMENT INC
Address:5100 W HENRIETTA RD
Box:92912
City:ROCHESTER
State:NY
ZIP:14692-9012
Country:US
Phone:(716) 359-2502
Contract Num:MDA414-01-P-0094
CAGE:63759

========== Composition/Information on Ingredients ==========

Ingred Name:POTASSIUM HYDROXIDE
CAS:1310-58-3
RTECS #:TT2100000
= Wt:15.
ACGIH TLV:2 MG/M3
ACGIH STEL:C2 MG/M3
EPA Rpt Qty:1000 LBS
DOT Rpt Qty:1000 LBS

Ingred Name:WATER
CAS:7732-18-5
RTECS #:ZC0110000
Fraction by Wt: BALANCE

Hazards Identification

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
Health Hazards Acute and Chronic:CONDITIONS AGGRAVATED/TARGET ORGANS: NONE KNOWN. ACUTE: IRRITATION TO SKIN, EYES, LUNGS, MUCOUS MEMBRANES AND GI TRACT. CHRONIC: DERMATITIS.
Effects of Overexposure:ACUTE: IRRITATION TO SKIN, EYES, LUNGS, MUCOUS MEMBRANES AND GI TRACT. CHRONIC: DERMATITIS.
Medical Cond Aggravated by Exposure:NNONE KNOWN.

First Aid Measures

First Aid:SKIN: WASH THOROUGHLY WITH RUNNING WATER. GET MEDICAL ADVICE IF IRRITATION DEVELOPS. EYES: WASH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES, LIFTING LOWER AND UPPER EYELIDS OCCASIONALLY. GET MED ICAL ATTENTION IMMEDIATELY. INHALATION:REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT GIVE OXYGEN. CALL A PHYSICIAN. INGESTION: GIVE SEVERAL GLASSES OF W ATER OR MILK, IF AVAILABLE TO DRINK. VOMITING MAY OCCUR SPONTANEOUSLY, BUT DO NOT INDUCE. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL ATTENTION IMMEDIATELY. GIVE CITRUS JUICES T O HELP NEUTRALIZE.

Fire Fighting Measures

Extinguishing Media:USE ANY MEDIUM SUITABLE FOR EXTINGUISHING SUPPORTING FIRE.
Fire Fighting Procedures:IN THE EVENT OF A FIRE, WEAR FULL PROTECTIVE CLOTHING AND NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN THE PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MODE. CALL FIRE DEPT. IMMEDIATELY.
Unusual Fire/Explosion Hazard:NOT CONSIDERED TO BE A FIRE HAZARD. NOT CONSIDERED TO BE AN EXPLOSION HAZARD.

Accidental Release Measures

Spill Release Procedures:DILUTE WITH WATER AND NEUTRALIZE WITH DILUTE ACID. CLEANUP/DISPOSAL METHODS ARE RECOMMENDATIONS ONLY. CHECK YOUR LOCAL, STATE AND FEDERAL REGULATIONS.

Handling and Storage

Handling and Storage Precautions:STORE IN A COOL LOCATION.
Other Precautions:CONTRACTOR'S PART NUMBER/TRADE NAME: KIT AP LAB 5/ITEM# 36-7104.

Exposure Controls/Personal Protection

Respiratory Protection:NONE NEEDED NORMALLY.
Ventilation:LOCAL EXHAUST: YES. MECHANICAL (GENERAL): YES.
Protective Gloves:VINYL OR RUBBER.
Eye Protection:GOGGLES.
Other Protective Equipment:LAB COAT
Supplemental Safety and Health
HEALTH=3, FLAMMIBILITY=0, REACTIVITY=0. HAZARD RATING: LEAST-0, SLIGHT-1, MODERATE-2, HIGH-3, EXTREME-4.

Physical/Chemical Properties

HCC:B1
Boiling Pt:<100.C, 212.F
Melt/Freeze Pt:<0.C, 32.F
Spec Gravity:~1
Appearance and Odor:CLEAR COLORLESS SOLUTION, NO ODOR.

Stability and Reactivity Data

Stability Indicator/Materials to Avoid:YES
ACIDS.
Stability Condition to Avoid:STABLE. NONE.
Hazardous Decomposition Products:NONE KNOWN.

Disposal Considerations

Waste Disposal Methods:DISPOSE IN A RCRA-APPROVED WASTE FACILITY OR SEWER THE NEUTRALIZED SLURRY WITH EXCESS WATER IF LOCAL ORDINANCES ALLOW.

MSDS Transport Information

Transport Information:D.O.T. REGULATIONS CHANGE FROM TIME TO TIME. PLEASE CONSULT THE MOST RECENT D.O.T. REGULATIONS. ESSENTIALLY SIMILAR TO FORM OSHA-174.

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 635.00

Revision Date: March 25, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

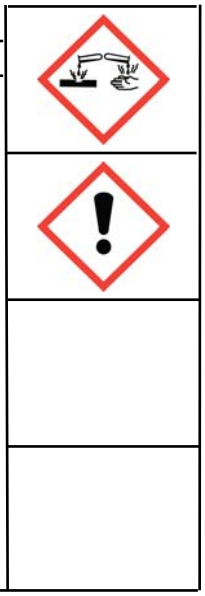
Potassium Hydroxide Solution, 1M - 3M

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 4). Harmful if swallowed (H302). Do not eat, drink or smoke when using this product (P270).

Hazard class: Skin corrosion or irritation (Category 1). Causes severe skin burns and eye damage (H314). Do not breathe mist, vapors or spray (P260).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium hydroxide	1310-58-3	KOH	56.11	6-17%
Water	7732-18-5	H_2O	18.00	83-94%

SECTION 4 — FIRST AID MEASURES

Immediately call a POISON CENTER or physician (P310).

If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340). **If in eyes:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351 +P338).

If on skin (or hair): Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353). Wash contaminated clothing before reuse (P363).

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.

In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain spill with sand or absorbent material; neutralize with citric acid, and deposit in sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).
Exposure guidelines: (as potassium hydroxide) Ceiling 2 mg/m^3 (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless liquid. Odorless.

pH: basic

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Good, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Corrosive to skin, eyes, and other tissues.
Chronic effects: N.A.
Target organs: Eyes, skin, respiratory system

ORL-RAT LD_{50}: 273 mg/kg (as KOH)
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #10 is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Potassium Hydroxide, solution. Hazard class: 8, Corrosive. UN number: UN1814.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 25, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 634.00

Revision Date: July 1, 2015

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

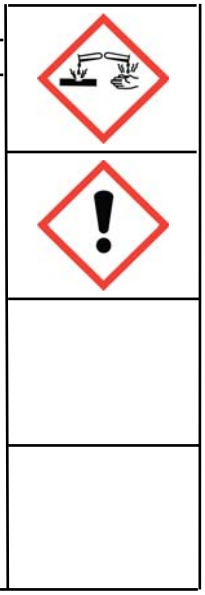
Potassium Hydroxide

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 4). Harmful if swallowed (H302). Do not eat, drink or smoke when using this product (P270).

Hazard class: Skin corrosion or irritation (Category 1). Causes severe skin burns and eye damage (H314).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium hydroxide	1310-58-3	KOH	56.11	
Synonyms: caustic potash				

SECTION 4 — FIRST AID MEASURES

Immediately call a POISON CENTER or physician (P310).
If inhaled: Remove victim to fresh air in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If on skin:** Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353). Wash contaminated clothing before reuse (P363).
If swallowed: Rinse mouth. Do NOT induce vomiting (P301+P330+P331).

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
H-3
F-0
R-1

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Do not allow solid to become airborne. Ventilate area. Wipe up, place in sealed bag or container and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates.
Absorbs moisture and carbon dioxide from the air. Keep container tightly closed. Store in a cool, dry place. Use only in a hood or in a well-ventilated area.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or in a well-ventilated area.
Exposure guidelines: Ceiling 2 mg/m^3 (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White pellets or flakes. Odorless.
Soluble: Water, alcohol and glycerol
Reagent potassium hydroxide contains 10-15% water.

Boiling point: 1320 ^oC
Melting point: 405 ^oC (varies with water content)
pH: basic
Specific gravity: 2.044

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with aluminum, organic materials, acid chlorides, acid anhydrides, magnesium, and copper.
Shelf life: Fair, absorbs water and carbon dioxide from the air.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Corrosive to skin, eyes, and other tissues.
Chronic effects: N.A.
Target organs: Eyes, skin, respiratory system

ORL-RAT LD_{50}: 1,230 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #10 is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Potassium hydroxide, solid. Hazard class: 8, Corrosive. UN number: UN1813.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (215-181-3), RCRA code D002, D003.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: July 1, 2015

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 637.00

Revision Date: January 16, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Potassium Iodate Solution

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **N/A**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium iodate	7758-05-6	KIO_3	214.01	4% or less
Water	7732-18-5	H_2O	18.00	96-99%

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #6. Store with chlorates, bromates, iodates, chlorites, perchloric acid, and peroxides.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless liquid. Slight iodine odor.

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-MUS LDL_0: 531 mg/kg as potassium iodate
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #12a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: January 16, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 636.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Potassium Iodate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Oxidizing solids (Category 2). May intensify fire; oxidizer (H272). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

Hazard class: Specific target organ toxicity, single exposure; Respiratory tract irritation (Category 3). May cause respiratory irritation (H335). Avoid breathing dust or fumes (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium iodate	7758-05-6	KIO_3	214.01	

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313)
If inhaled: Remove victim to fresh air in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Rinse cautiously with water for several minutes (P351).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
Strong oxidizer. Fire risk when exposed to organic or combustible materials.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #6. Store with chlorates, bromates, iodates, chlorites, perchloric acid, and peroxides. Store in a cool dry place. Keep away from combustible materials (P220). Take any precautions to avoid mixing with combustibles (P221). Keep container tightly closed (P233).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White crystalline powder. Strong iodine odor.
Soluble: Water and dilute sulfuric acid. Insoluble in alcohol.

Melting point: 560 ^{o}C (decomposes)
Specific gravity: 3.89

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong reducers, finely powdered metals, organic and combustible materials.
When mixed with iodate, aluminum, copper, arsenic, phosphorus, carbon and sulfur products may explode on heating.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-MUS LDL_0: 531 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #12a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Oxidizing solid, N.O.S. Hazard class: 5.1, Oxidizer. UN number: UN1479.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-831-9), RCRA code D001.

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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Anachemia
255 Norman.
Lachine (Montreal), Que
H8R 1A3

Material Safety Data Sheet

EMERGENCY NUMBERS:

(USA) CHEMTREC : 1(800) 424-9300 (24hrs)
(CAN) CANUTEC : 1(613) 996-6666 (24hrs)
(USA) Anachemia : 1(518) 297-4444
(CAN) Anachemia : 1(514) 489-5711

WHMIS	Protective Clothing	TDG Road/Rail
WHMIS CLASS: D-2A		Not controlled under TDG (Canada). PIN: Not applicable. PG: Not applicable.

Section I. Product Identification and Uses

Product name	**POTASSIUM IODIDE, VOLUMETRIC SOLUTION, 0.1N**
Chemical formula	Not available.
Synonyms	R-4630F, 74256
Supplier	Anachemia Canada. 255 Norman. Lachine (Montreal), Que H8R 1A3
Material uses	For laboratory use only.

CI#	Not available.
CAS#	Not available.
Code	R-4630F
Formula weight	Not available.
Supersedes	

Section II. Ingredients

Name	CAS #	%	TLV
1) POTASSIUM IODIDE	7681-11-0	1-3	Not established by ACGIH
2) POTASSIUM HYDROXIDE	1310-58-3	<0.1	Exposure limits: ACGIH Ceiling limit 2 mg/m3
3) WATER	7732-18-5	Balance	Not established by ACGIH

Toxicity values of the hazardous ingredients

POTASSIUM IODIDE:
ORAL (LDLo): Acute: 1862 mg/kg (Mouse). 916 mg/kg (Rabbit).

Section III. Physical Data

Physical state and appearance / Odor	Colorless liquid. Odorless.
pH (1% soln/water)	Not available.
Odor threshold	Not available.
Percent volatile	100% (w/w). (Water).
Freezing point	Not available.
Boiling point	Not available.
Specific gravity	>1 (Water = 1)
Vapor density	Not available.
Vapor pressure	Not available.
Water/oil dist. coeff.	Not available.
Evaporation rate	Not available.
Solubility	Miscible in water.

Section IV. Fire and Explosion Data

Flash point	Not applicable.
Flammable limits	Not available.
Auto-ignition temperature	Not available.
Fire degradation products	Hydrogen iodide. Oxides of potassium. Iodine. Iodides.
Fire extinguishing procedures	Use extinguishing media suitable for surrounding materials. Wear adequate personal protection to prevent contact with material or its combustion products. Self contained breathing apparatus with a full facepiece operated in a pressure demand or other positive pressure mode.
Fire and Explosion Hazards	The sensitivity to static discharge is not available. The sensitivity to impact is not available. Emits toxic fumes under fire conditions.

Section V. Toxicological Properties

Routes of entry	Inhalation and ingestion. Eye contact. Skin contact.
Effects of Acute Exposure	Harmful by ingestion, inhalation or skin absorption. Irritant. Target organs: thyroid, eyes, skin, respiratory system.
Eye	Eye irritation with redness, pain, and conjunctivitis.
Skin	Causes skin irritation.
Inhalation	Material is irritating to mucous membranes and upper respiratory tract.
Ingestion	Causes gastrointestinal irritation. Weakness.

Section V. Toxicological Properties

Effects of Chronic Overexposure	Hypothyroidism with possible goiter. Skin sensitization possible. May produce "iodism" which may be manifested by skin rash (boils, blisters, blue and black spots), running nose, headache, salivation, diarrhea, rhinitis and irritation of the mucous membranes. Weakness, anemia, loss of weight, laryngitis, bronchitis, stomatitis, conjunctivitis, edema of the glottis and general depression may also occur. May cause reproductive effects based on studies in laboratory animals. Mutagen. Postnatal development injury in animal. Embryotoxic and/or foetotoxic in animal. Passes through the placental barrier in human. Excreted in maternal milk in human. Carcinogenic effects: Not available. To the best of our knowledge, the chemical, physical, and toxicity of this substance has not been fully investigated.

Section VI. First Aid Measures

Eye contact	Immediately flush eyes with copious quantities of water for at least 15 minutes holding lids apart to ensure flushing of the entire surface. Call a physician.
Skin contact	Immediately flush skin with plenty of water and soap for at least 15 minutes while removing contaminated clothing and shoes. If irritation occurs or persists seek medical attention. Wash contaminated clothing before reusing. Discard contaminated leather articles such as shoes and belt.
Inhalation	Remove patient to fresh air. Administer approved oxygen supply if breathing is difficult. Administer artificial respiration or CPR if breathing has ceased. Call a physician.
Ingestion	If conscious, wash out mouth with water. Have conscious person drink several glasses of water to dilute. Seek immediate medical attention. Never give anything by mouth to an unconscious or convulsing person.

Section VII. Reactivity Data

Stability	Unstable. Light and moisture sensitive. Conditions to avoid: High temperatures, sparks, open flames and all other sources of ignition, contamination.
Hazardous decomp. products	Hydrogen iodide. Oxides of potassium. Iodine. Iodides.
Incompatibility	Potassium iodide reacts violently with oxidizing agents, perchloric acid, bromine trifluoride, bromine trichloride, chlorine trifluoride, chloral hydrate, fluorine perchlorate, diazonium salts, potassium perchlorate, diisopropyl peroxydicarbonate, bromine pentafluoride, charcoal, calomel, alkali metals. Acids, organic materials, metals (ex: steel, aluminum, brass, magnesium, zinc, cadmium, tin, copper, nickel and their alloys), reducing agents, metallic salts, tartaric acid. Water may react with water reactive materials (sodium, potassium, etc...).
Reaction Products	Will corrode a wide variety of metals. May decompose/discolor on exposure to light. Hazardous polymerization will not occur.

Section VIII. Preventive Measures

Protective Clothing in case of spill and leak A self contained breathing apparatus should be used to avoid inhalation of the product.

Spill and leak Absorb on sand or vermiculite and place in a closed container for disposal. Ventilate area and wash spill site after material pick up is complete. DO NOT empty into drains. DO NOT touch damaged container or spilled material.

Waste disposal According to all applicable regulations.

Storage and Handling Store in a cool place away from heated areas, sparks, and flame. Store in a well ventilated area. Store away from incompatible materials. Do not add any other material to the container. Do not wash down the drain. Do not breathe gas/fumes/vapor/spray. In case of insufficient ventilation, wear suitable respiratory equipment. Keep away from direct sunlight or strong incandescent light. Keep container tightly closed and dry. Manipulate under an adequate fume hood. Empty containers may contain a hazardous residue. Handle and open container with care. Take off immediately all contaminated clothing. This product must be manipulated by qualified personnel. Do not get in eyes, on skin, or on clothing. Wash well after use. In accordance with good storage and handling practices. Do not allow smoking and food consumption while handling. In case of accident or if you feel unwell, seek medical advice immediately (show the label when possible.).

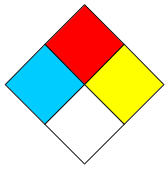
Section IX. Protective Measures

Protective clothing Splash goggles. Impervious gloves, apron, coveralls, and/or other resistant protective clothing. Sufficient to protect skin. A OSHA/MSHA jointly approved respirator is advised in the absence of proper environmental controls. For emergency situations, a self-contained respirator is recommended (NIOSH-approved). Do not wear contact lenses. Make eye bath and emergency shower available. Ensure that eyewash station and safety shower is proximal to the work-station location.

Engineering controls Local mechanical exhaust ventilation capable of minimizing emissions at the point of use. Do not use in unventilated spaces.

Section X. Other Information

Special Precautions or comments Embryotoxic and foetotoxic! Mutagen! Reproductive toxin! Suspected teratogen! Sensitizer! Irritant! Do not breathe vapor. Avoid all contact with the product. Avoid prolonged or repeated exposure. Use in a chemical fume hood. Air and light sensitive. Handle and open container with care. Container should be opened only by a technically qualified person.
Synergistic materials: Increases the toxicity of selenium.
RTECS NO: TT2975000 (Potassium iodide).



NFPA

Prepared by MSDS Department/Département de F.S..

Validated 25-Oct-2010

Telephone# (514) 489-5711

While the company believes the data set forth herein are accurate as of the date hereof, the company makes no warranty with respect thereto and expressly disclaims all liability for reliance thereon. Such data are offered solely for your consideration, investigation and verification.

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 639.00

Revision Date: February 6, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Potassium Iodide Solution

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **N/A**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium iodide	7681-11-0	KI	166.01	2-17%
Water	7732-18-5	H_2O	18.00	83-98%
Propionic acid	79-09-4	CH_3CH_2COOH	74.08	0.2%

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Light and heat sensitive. Store in a cool, dark place away from light and heat.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless liquid. Odorless.

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Good, if stored in a cool, dark place; protect from light and heat.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

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Revision Date: February 6, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 638.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Potassium Iodide

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 4). Harmful if swallowed (H302). Do not eat, drink or smoke when using this product (P270).

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium iodide	7681-11-0	KI	166.01	

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313)
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If on skin: Rinse cautiously with water for several minutes (P351).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell (P301+P330+P312).

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Sweep up, place in sealed bag or container and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Air, light, and moisture sensitive. Store in a Flinn Chem-Saf™ bag in a cool, dry place away from light.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White crystals, granules or powder. Odorless.
Soluble: Water, alcohol, acetone, and glycerol

Boiling point: 1420 ^{o}C
Melting point: 686 ^{o}C
Specific gravity: 3.123

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with reducers, acid, steel, aluminum, alkali metals, brass, magnesium, zinc, cadmium, copper, tin, nickel and their alloys.
Shelf life: Poor, sensitive to moisture and light. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant, possible sensitizer
Chronic effects: Possible teratogen
Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-659-4).

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Material Safety Data Sheet (MSDS)

MSDS #: 641.00

Revision Date: December 14, 2011

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Potassium Nitrate Solution

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

SECTION 2 — COMPOSITION, INFORMATION ON INGREDIENTS

Potassium nitrate (7757-79-1) 5%-10% and Water (7732-18-5) 90-95%.

CAS#: None established

SECTION 3 — HAZARDS IDENTIFICATION

Colorless aqueous solution. Odorless.
Substance is not considered hazardous. However, not all health aspects of this substance have been thoroughly investigated.

FLINN AT-A-GLANCE

Health-0
Flammability-0
Reactivity-0
Exposure-0
Storage-0

0 is low hazard, 3 is high hazard

SECTION 4 — FIRST AID MEASURES

Call a physician and seek medical attention for further treatment, observation, and support after first aid.
Inhalation: Remove to fresh air at once. If breathing has stopped, give artificial respiration immediately.
Eye or External: Immediately flush with fresh water for at least 15 minutes.
Internal: Rinse mouth. Give large quantities of water for dilution. Call a physician or poison control at once.

SECTION 5 — FIRE FIGHTING MEASURES

Noncombustible liquid.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Restrict unprotected personnel from area and ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #3. Store with amides, nitrates and nitrites.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes, skin, and clothing. Wear chemical splash goggles, chemical-resistant gloves, and chemical-resistant apron.

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SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Clear colorless solution.
Concentration 0.1 to 1.0 Molar.

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Good

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 3750 as potassium nitrate
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply, before proceeding.
Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated
Hazard class: N/A
UN number: N/A
N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

This Material Safety Data Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 640.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Potassium Nitrate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Oxidizing solids (Category 3). May intensify fire; oxidizer (H272). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium nitrate	7757-79-1	KNO_3	101.11	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
Strong oxidizer. Dangerous fire risk if shocked or heated. Avoid contact with organic materials.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #3. Store with amides, nitrates, nitrites and azides.
Slightly hygroscopic. Store in a Flinn Chem-Saf™ bag in a cool, dry place. Keep away from combustible materials (P220). Take any precautions to avoid mixing with combustibles (P221).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Transparent, colorless crystals or powder. Odorless.
Soluble: Water and glycerin. Slightly in alcohol.

Melting point: 333 ^{o}C
Specific gravity: 2.1062

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong reducers, finely powdered metals, strong acids, organic and combustible materials.
Shelf life: Good, slightly hygroscopic. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant
Chronic effects: N.A.
Target organs: Blood, central nervous system

ORL-RAT LD_{50}: 3750 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Potassium Nitrate. Hazard class: 5.1, Oxidizer. UN number: UN1486.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-818-8), RCRA code D001.

SECTION 16 — OTHER INFORMATION

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Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 642.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

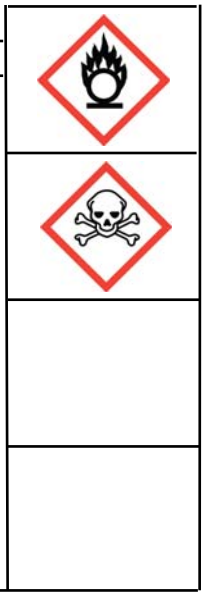
Potassium Nitrite

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Oxidizing solids (Category 2). May intensify fire; oxidizer (H272). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Acute toxicity, oral (Category 3). Toxic if swallowed (H302). Do not eat, drink or smoke when using this product (P270).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium nitrite	7758-09-0	KNO_2	85.11	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Strong oxidizer. Dangerous fire or explosion risk if shocked or heated, or in contact with organic materials.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher(P370+P378).

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #3. Store with amides, nitrates, nitrites and azides. Store in a poisons cabinet. Hygroscopic. Store in a cool, dry place within a Flinn Chem-Saf™ bag.
Keep and store away from clothing and combustible materials (P220). Take any precautions to avoid mixing with combustibles (P221).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White or slightly yellow prisms or sticks. Odorless.
Soluble: Water. Insoluble in alcohol.

Melting point: 440 ^{o}C (decomposition starts at 350 ^{o}C).
Specific gravity: 1.915

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong reducers, finely powdered metals, strong acids, organic materials, heat, open flame or any source of ignition.
Shelf life: Fair, hygroscopic. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Toxic, irritant
Chronic effects: N.A.
Target organs: Blood, smooth muscle

ORL-RBT LD_{50}: 200 mg/kg
IHL-MUS LC_{50}: 85 g/m^3/2H
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #12b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Potassium Nitrite; Hazard class: 5.1, Oxidizer; UN number: UN1488

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-832-4), RCRA code D001.

SECTION 16 — OTHER INFORMATION

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Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 643.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Potassium Oxalate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral and dermal (Category 4). Harmful if swallowed or in contact with skin (H302 +H312). Do not eat, drink or smoke when using this product (P270).

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium oxalate, monohydrate	6487-48-5	$K_2C_2O_4 \cdot H_2O$	184.24	
Synonym: Ethanedioic acid, dipotassium salt				

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313). **If on skin:** Rinse cautiously with water for several minutes (P302+P351). Wash contaminated clothing before reuse (P362).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell (P301+P330+P312).

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Efflorescent in warm, dry air. Store within a Flinn Chem-Saf™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless transparent crystals. Odorless.
Soluble: Water
Efflorescent in warm, dry air.

Melting point: 160 ^{o}C (decomposes)
Specific gravity: 2.127

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizing agents.
Shelf life: Efflorescent in warm, dry air. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant
Chronic effects: N.A.
Target organs: Kidneys, nerves

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (233-137-1).

SECTION 16 — OTHER INFORMATION

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Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 646.00

Revision Date: January 16, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Potassium Permanganate Solution

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **N/A**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium permanganate	7722-64-7	$KMnO_4$	158.04	0.2-3%
Water	7732-18-5	H_2O	18.00	99.8%

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #8. Store with borates, chromates, manganates and permanganates.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Dark, blue-violet liquid. Odorless.

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Good.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 1090 mg/kg as potassium permanganate
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #12a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

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Revision Date: January 16, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 645.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

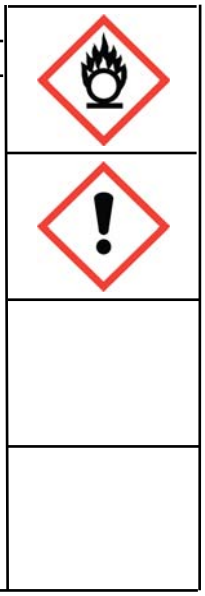
Potassium Permanganate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Oxidizing solids (Category 2). May intensify fire; oxidizer (H272). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Acute toxicity, oral (Category 4). Harmful if swallowed (H302). Do not eat, drink, or smoke when using this product (P270).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium permanganate	7722-64-7	$KMnO_4$	158.04	

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313).
If inhaled: Remove victim to fresh air in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Rinse cautiously with water for several minutes.
If swallowed: Rinse mouth (P330). Call a POISON CENTER or physician if you feel unwell (P301+P312).

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
Powerful oxidizing agent; dangerous fire and explosion risk. When heated in contact with organic or combustible materials, can explode. When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher (P370+P378).

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #8. Store with borates, chromates, manganates and permanganates.
Store in a cool dry place.
Keep away from combustible materials (P220). Take any precautions to avoid mixing with combustibles (P221).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Dark purple to blue crystals with a metallic sheen. Odorless.
Soluble: Water, acetone and methyl alcohol

Melting point: 240 ^{o}C (decomposes)
Specific gravity: 2.7032

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong reducers, organic and combustible materials, finely powdered metals, peroxides, aluminum, zinc, lead, copper, and their alloys.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Toxic, corrosive. Overexposure may produce anemia, swelling of the throat with possible suffocation, kidney damage and infertility in men. Chronic effects: N.A.
Target organs: Central nervous system, blood, kidneys, lungs

ORL-RAT LD_{50}: 1090 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #12a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Potassium Permanganate; UN number: UN1490. Hazard class: 5.1, Oxidizer.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-760-3), RCRA code D001.

SECTION 16 — OTHER INFORMATION

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Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 647.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Potassium Persulfate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Oxidizing solids (Category 3). May intensify fire; oxidizer (H272). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Acute toxicity, oral (Category 4). Harmful if swallowed (H302). Do not eat, drink or smoke when using this product (P270).

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

Hazard class: Sensitization, skin or respiratory (Category 1). May cause an allergic skin reaction, asthma symptoms or breathing difficulties if inhaled (H317+H334). Avoid breathing dust or fumes (P261).

Hazard class: Specific target organ toxicity, single exposure; Respiratory tract irritation (Category 3). May cause respiratory irritation (H335).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium persulfate	7727-21-1	$K_2S_2O_8$	270.33	
Synonym: Potassium peroxydisulfate				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician (P311).
If inhaled: If breathing is difficult, remove victim to fresh air. Keep at rest in a position comfortable for breathing (P304+P341).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Rinse cautiously with water for several minutes (P351). Wash contaminated clothing before reuse (P363).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell (P301+P330+P312).

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
Strong oxidizer. Liberates oxygen at 100 °C, fire risk when in contact with organic and combustible materials.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #6. Store with chlorates, bromates, iodates, chlorites, perchloric acid, and peroxides.
Deliquescent. Store in a cool, dry place within a Flinn Chem-Saf™ bag. Keep away from combustible materials (P220). Take any precautions to avoid mixing with combustibles (P221).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). In case of inadequate ventilation, wear respiratory protection (P285).
Exposure guidelines: (as persulfate) TLV 0.1 mg/m^3 (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White crystals. Odorless
Soluble: Water. Insoluble in alcohol.

Melting point: Decomposes below 100 ^oC.
Specific gravity: 2.477

SECTION 10 — STABILITY AND REACTIVITY

Avoid heat, dry material decomposes above 100 C. Wet material decomposes at 50 C.
Avoid contact with strong reducers, finely powdered metals, strong bases, alcohols and hydrazine.
Shelf life: Fair to poor, deliquescent. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Serious eye irritation, skin and respiratory tract irritant, sensitizer, may cause allergy or asthma symptoms if inhaled.
Chronic effects: N.A.
Target organs: Eyes, skin, mucous membranes.

ORL-RAT LD_{50}: 802 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #12a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Potassium Persulfate. Hazard class: 5.1, Oxidizer. UN number: UN1492.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-781-8), RCRA code D001.

SECTION 16 — OTHER INFORMATION

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 649.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Potassium Phosphate Dibasic

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium phosphate dibasic	7758-11-4	K_2HPO_4	174.18	
Synonym: Potassium hydrogen phosphate				

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If on skin: Rinse cautiously with water for several minutes (P351).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Deliquescent Store in a cool, dry place within a Flinn Chem-Saf™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White crystals or powder. Odorless.
Soluble: Water

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers.
Shelf life: Poor, deliquescent. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-834-5).

SECTION 16 — OTHER INFORMATION

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 648.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Potassium Phosphate Monobasic

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium phosphate monobasic Synonym: Potassium dihydrogen phosphate	7778-77-0	KH_2PO_4	136.09	

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313)
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Rinse cautiously with water for several minutes (P351).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Hygroscopic. Store in a cool dry place within Flinn Chem-Saf™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless crystals. Odorless.
Soluble: Water. Insoluble in alcohol.

Melting point: 253 ^{o}C
Specific gravity: 2.338

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers.
Shelf life: Poor, hygroscopic. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Eye irritant
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-913-4).

SECTION 16 — OTHER INFORMATION

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 653.00

Revision Date: March 27, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Potassium Sulfate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin corrosion or irritation (Category 3). Causes mild skin irritation (H316).

Hazard class: Serious eye damage or irritation (Category 2B). Causes eye irritation (H320).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium sulfate	7778-80-5	K_2SO_4	174.27	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. **If in eyes:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313). **If skin irritation occurs**: Get medical advice or attention (P332 +P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher**.**

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Store in a cool dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White crystalline powder. Odorless.
Soluble: Water. Insoluble in alcohol.

Melting point: 1069 ^{o}C
Specific gravity: 2.7

SECTION 10 — STABILITY AND REACTIVITY

Reacts violently with aluminum and magnesium. Avoid contact with strong oxidizers.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: G.I. disturbances
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 6600 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-915-5).

SECTION 16 — OTHER INFORMATION

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 655.00

Revision Date: March 27, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Potassium Thiocyanate Solution

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin corrosion or irritation (Category 3). Causes mild skin irritation (H316).

Hazard class: Serious eye damage or irritation (Category 2B). Causes eye irritation (H320).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium thiocyanate	333-20-0	KSCN	97.18	1-10%
Water	7732-18-5	H_2O	18.00	90-99%

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If skin irritation occurs: Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #7. Store with arsenates, cyanides and cyanates.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Clear, colorless liquid. Odorless.

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Good, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 854 mg/kg as KSCN
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 654.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Potassium Thiocyanate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral, dermal, and inhalation (Category 4). Harmful if swallowed, inhaled or in contact with skin (H302+H312+H332). Do not eat, drink or smoke when using this product (P270). Avoid breathing dust or fumes (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium thiocyanate	333-20-0	KSCN	97.18	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Rinse cautiously with water for several minutes (P302+P351). Call a POISON CENTER if you feel unwell (P312). Wash contaminated clothing before reuse (P362).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell (P301+P330+P312).

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #7. Store with arsenates, cyanides and cyanates.
Moisture sensitive material. Store in a Flinn Chem-Saf™ bag. Store in a cool dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless transparent crystals. Odorless.
Soluble: Water, alcohol and acetone

Specific gravity: 1.88
Melting point: 173 ^{o}C

SECTION 10 — STABILITY AND REACTIVITY

If heated or in contact with concentrated acids, may liberate poisonous fumes of hydrogen cyanide. Avoid contact with strong acids, oxidizing agents, and heat.
Shelf life: Fair to poor, deliquescent. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Toxic, irritant, eczema
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 854 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (206-370-1).

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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MATERIAL SAFETY DATA SHEET
(SIMILAR TO OSHA FORM 174)

N.A.=Not Applicable
Not Est.=Not Established
Prop.=Proprietary

SECTION 1-MANUFACTURER/DISTRIBUTOR INFORMATION

Product Name: Potent Degreaser Cleaner
Supplier's Name: INDCO, Inc.
Supplier's Address: N. Railroad & Essex St., Gloucester City, NJ 08030
Emergency Phone #(856)456-6100
HMIS Hazard Code: Health:2 Flammability:0 Reactivity: 0 Other:0
Chemical Name: N.A. Propreitary Blend
Chemical Family: Alkaline Detergent
Formula: N.A. Blended Product
D.O.T. Shipping Name: CORROSIVE LIQUID n.o.s. (contains potassium hydroxide)
Hazard Class: 8
D.O.T. ID#: UN1760

SECTION 2-HAZARDOUS INGREDIENTS

CHEMICAL NAME	CAS NO.	% Concentrate Range	Hazard Ratings (TLV/PEL)
2-Butoxy Ethanol	111-76-2	PROP.	25 pppm
Polyethylene Mono (Nonylphenyl) Ether Glycols	9016-45-9	PROP.	Not Est.
Sodium Silicate	13870-28-5	PROP.	5MG/M3
Potassium Hydroxide	1310-58-3	PROP.	2MG/M3
Dodecyl Benzen Sulfonic Acid SodiumSalt	25155-30-0	PROP.	Not Est.

SECTION 3-PHYSICAL DATA

Boiling Point (F): 212°
Vapor Pressure: = To Water
Vapor Density: = To Water
Solubility In Water: Complete
Appearance: Clear, Thin, Green Liquid
Odor: Buttery Citrus
Specific Gravity: 1.040
Evaporation Rate: = To Water

SECTION 4-FIRE AND EXPLOSION DATA

Flash Point (F): None to boiling (TOC)
Flammable Limits: Not Est.
Unusual Fire & Explosion Hazards: None

SECTION 5-HEALTH HAZARD DATA

Route(s) of Entry: Inhalation:No Skin:Yes Ingestion:Yes
Threshold Limit Value: Not Est.
Effects of Overexposure: Causes skin and eye irritation. Harmful if swallowed. May cause severe mucosal damage and gastric distress. May cause systemic intoxication.
Emergency & First Aid Procedures: For Eyes: Flush with water for at least fifteen minutes. Get medical aid. **For Skin:** Thoroughly wash with water and apply emollient creme. If irritation persists get medical aid. **If Ingested:** Do not induce vomiting. Give milk, egg white, gelatin, or water. Get immediate medical aid.
Conditions Aggravated by Exposure: May aggravate existing dermatitis and irritate sensitive skin.

Listed Carcinogen, Mutagen, Teratogen (Ingredient, Source, Amount): None

SECTION 6-REACTIVITY DATA

Stability: Stable
Conditions to Avoid: None
Incompatibility: Acids and Oxidizers
Hazardous Decomposition Products: Carbon Oxides and Amines
Hazardous Polymerization: Will not occur.

SECTION 7-SPILL OR LEAK PROCEDURES

Steps to be taken if material is released or spilled: Recontainerize by mopping, wet vacuum, or suitable absorbent. Be cautious of slippery floors.
Waste disposal method: Follow local, state, and federal regulations.

SECTION 8-SPECIAL PROTECTION INFORMATION

Respiratory Protection: Generally not required.
Ventilation: Local.
Protective Gloves: Rubber or latex.
Eye Protection: Goggles or safety glasses with shields.
Other Protective Equipment: Rubber boots should be worn if working in standing solution

SECTION 9-SPECIAL PRECAUTIONS

Precautions to be taken in handling and storage: Store between 40° and 120° F.
Other Precautions: Thoroughly wash all contaminated clothing before reuse. Keep out of reach of children. For sale to, use and storage by service personnel only.

The information contained in this MSDS was obtained from current and reliable sources, however the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions or handling, storage and disposal of this product are beyond the control of this company, it is not responsible for loss, injury and expense arising out of the product's improper use. No warranty, expressed or inferred, regarding the product described in this MSDS shall be created or inferred by any statement in this MSDS. Various government agencies may have specific regulations regarding the transportation, handling, storage, use or disposal of this product which may not be covered by this MSDS. The user is responsible for full compliance.

DATE PREPARED-10/05/00 By: G.C.

MATERIAL SAFETY DATA SHEET

SECTION I

MANUFACTURER	MINNESOTA CLAY CO. USA 8001 GRAND AVE SO BLOOMINGTON, MN. 55420
EMERGENCY TELEPHONE	(612) 884-9101
CHEMICAL NAME	ALUMINA SILICATE

TRADE NAME AND SYNONYMS **POTTER'S SLIPS:** LAVENDER, TURQUOISE, BLACK, WHITE, GREEN, YELLOW, PINK, GOLD, TERRA COTTA, AND BLUE

SECTION II
HAZARDOUS INGREDIENTS

MATERIAL	%	OSHA/PEL 8HR TWA
*FREE SILICA	UP TO 25%	0.1 mg/cu.m

Harmful only when prolonged & excessive respiration of dry, airborne materials occurs. **This product has been certified AP Non-Toxic and labeling conforms to ASTM D-4236.**

SPECIAL LABELING INSTRUCTIONS
Minnesota/Midwest Clay Company is a subscriber to the Art and Craft Material Institute, 100 Boylston St., Boston MA 02116. Our clay and glaze products have been evaluated and certified in accordance with the voluntary chronic hazard labeling standard ASTM D-4236 (American Society for Testing and Materials). Products manufactured by Minnesota/Midwest Clay Company are identified with the following labels:
Products bearing the AP Approved Product or HL Health Label (non-toxic) Seal of the Arts and Crafts institute, Inc. are certified in a program of toxicological evaluation by a medical expert to contain no materials in sufficient quantities to be toxic or injurious to humans or to cause acute or chronic health problems. These products are certified by the institute to be labeled in accordance with the voluntary chronic labeling standard ASTM D-4236. In addition, there is no physical hazard as defined within 29CFR Part 1910.1200(c).

CONTAINS RESPIRABLE QUARTZ IN THE DRY FORM. Damp mop after use.

SECTION III
PHYSICAL DATA
BOILING POINT (f):N/A VAPOR DENSITY: N/A
VAPOR PRESSURE:N/A SOLUBILITY IN WATER:N/A
SPECIFIC GRAVITY (H2O=1):N/A PERCENT VOLATILE BY VOLUME:N/A
EVAPORATION RATE:N/A
APPEARANCE AND ODOR: One pint jar, 4 and 8 ounce squeeze bottles. See label for color of contents.

SECTION IV
FIRE AND EXPLOSION HAZARD DATA
FLASH POINT:N/A
No fire or explosion hazard associated with this product.

SECTION V
HEALTH HAZARD DATA
THRESHOLD LIMIT VALUE: See Section II

SECTION VI
REACTIVITY DATA
STABLE
There are no known conditions to avoid, incompatible materials, hazardous decomposition products, or hazardous polymerization, associated with this product.

SECTION VII
SPILL OR LEAK PROCEDURES
Dispose in accordance with Federal, State and Local regulations.

SECTION VIII
SPECIAL PROTECTION INFORMATION
See Section II.
SECTION IX
SPECIAL PRECAUTIONS
OTHER PRECAUTIONS: Vent kilns when firing.

SHEFFIELD
POTTERY, INC.
Mining / Raw & Moist Clay / Supplies

Pottery Clay
Type MW

MSDS

MASSACHUSETTS WHITE EARTHENWARE CLAY

We do not have an MSDS on the clay itself. Enclosed herewith are the MSDS Sheets on the following Ingredients.

BENTONITE 325M
C&C BALL CLAY
TALC
WHITING VICRON 2511

U.S. Route 7, P.O. Box 399 - Sheffield, Massachusetts 01257-0399
Phone No. 413-229-7700 or Toll Free 888-SPI-CLAY Fax: 413-229-0200

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Black Hills Bentonite, LLC

MATERIAL SAFETY AND TRANSPORTATION DATA SHEET

SECTION 1 — PRODUCT IDENTIFICATION

MANUFACTURERS NAME
Black Hills Bentonite, a Limited Liability Company

TELEPHONE NO.
(307) 265-3740

Trade Name: 200 & 325 Mesh Bentonite

ADDRESS
P.O. Box 9, Mills, WY 82644

CHEMICAL NAME AND SYNONYMS
Hydrous Silicate of Alumina / Wyoming Sodium Bentonite/Sodium Montmorillonite CAS No. 1302-78-9

SECTION 2 — HAZARDOUS INGREDIENTS

CAS #	Component	Percentage	Exposure Limit
14808-60-7	Crystalline Silica in the form of Quartz	>1%	PEL – See Below TLV – 0.05 mg/m^3 TWA (respirable fraction) MSHA – See Below

OSHA PEL and MSHA Exposure Limit for Crystaline Silica Quartz (Respirable) $\frac{10 mg/m^3}{\% \text{ Silica} + 2}$

National Institute for Occupational Safety and Health (NIOSH) has recommended that the permissible exposure limit be changed to 50 micrograms respirable free silica per cubic meter of air (0.05 mg/m^3) as determined by a full shift sample up to 10 hour working day, 40 hours per week. The 1974 NIOSH Criteria for a recommended Standard for Occupational Exposure to Crystalline Silica should be consulted for more detailed information.

PEL means OSHA Permissible Exposure Limit
TLV means American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value.
MSHA means Mine Safety and Health Administration Exposure Limit.
TWA means 8 hour time weighted average.

Note: The Permissible Exposure Limits (PEL) reported above are the pre-1989 limits that were reinstated by OSHA June 30, 1993 following a decision by the 11th Circuit Court of Appeals. These PELs are now being enforced by Federal OSHA. Be aware that more restrictive exposure limits may be enforced by some states, agencies or other authorities.

SECTION 3 — PHYSICAL DATA

BOILING POINT (°F) Not applicable	SPECIFIC GRAVITY (H_2O = 1) 2.6
VAPOR PRESSURE (mm Hg) Not Applicable	VAPOR DENSITY (AIR = 1) Not Applicable
EVAPORATION RATE Not Applicable	SOLUBILITY IN WATER Negligible
APPEARANCE AND ODOR Yellow, Blue, Brown granules or powder. Earthy odor.	DENSITY @ 20° C: UNCOMPACTED: 68 lbs/cubic foot

HAZARDOUS MATERIALS IDENTIFICATION

1 Health Hazard
0 Flammability
0 Reactivity

DEGREE OF HAZARD
4 = EXTREME
3 = High
2 = Moderate
1 = Slight
0 = Insignificant

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SECTION 8 SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION

Use NIOSH approved mechanical filter respirator for nontoxic dusts if dust concentration exceeds 10mg/m³.

VENTILATION

Sufficient to keep dust levels below the TLV for crystalline silica.

PROTECTIVE GLOVES

General duty work gloves.

EYE PROTECTION

If high dust conditions exist, tight fitting goggles are recommended.

OTHER PROTECTIVE EQUIPMENT

Eyewash

SECTION 9 SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Store out of the weather. Product becomes slippery when wet. Avoid contact water in walk areas.

OTHER PRECAUTIONS

PROPER SHIPPING NAME	PLACARDS	HAZARD CLASS
Not Regulated	None	Not Hazardous
REPORTABLE QUANTITY	HAZARDOUS SUBSTANCE	ID NUMBER
None	None	None

LABEL

None Required

SECTION 10 REGULATORY INFORMATION

SARA requires the submission of annual reports of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDS that are copied and distributed for this material. Components present in this product at a level which could require reporting under the statute are:

Chemical:	CAS #:
NONE	

Toxic Substances Control Act (TSCA)
The ingrediants of this product are on the TSCA inventory.

SECTION 11 STATE RIGHT TO KNOW

Quartz is on Canadian WHMIS (Workplace Hazardous Material Information System) Ingrediant Disclosure List, Massachusetts Substance List, New Jersey Right to Know Hazardous Substance List, and Pennsylvania Hazardous Substance List.

PREPARED BY: BLACK HILLS BENTONITE, LLC DATE: FEBRUARY, 2001

SECTION 4 FIRE AND EXPLOSION DATA

FLASH POINT	FLAMMABLE LIMITS
Not Applicable	Non Flammable

SECTION 5 HEALTH HAZARD DATA

CARCINOGENICITY - SEE ROUTES OF EXPOSURE AND EFFECTS (BELOW)

ACUTE ORAL LD_{50}	ACUTE DERMAL LD_{50}	AQUATIC TOXICITY (LC_{50})
ND	ND	10,000 mg/l

Inhalation. Breathing prolonged and excessive amounts of Bentonite dust may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may have the following serious chronic health effects:

Pneumoconiosis: Excessive inhalation of respirable dust may cause pneumonoconiosis, a respiratory disease, which can result in delayed, progressive, disabling and sometimes fatal lung injury. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function. This disease is exacerbated by smoking. Individuals with pneumoconiosis are predisposed to develop tuberculosis.

Cancer Status: The International Agency for Research on Cancer has determined that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1 - carcinogenic to humans). Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (published in June 1997) in conjunction with the use of these materials. The National Toxicology Program classifies respirable crystalline silica as "known to be a human carcinogen". Refer to the 9th Report on Carcinogens (2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (A2).

Other Data with Possible Relevance to Human Health:

There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by fibrosis of the lungs, skin and other internal organs) and kidney disease.

For further information consult "Adverse Effects of Crystalline Silica Exposure" published by the American Thoracic Society Medical Section of the American Lung Association, American Journal of Respiratory and Critical Care Medicine, Volume 155, pages 761-768, 1997.

SKIN	EYE	INHALATION
Potential irritant.	Potential irritant.	Irritation to lungs, nose, and throat.

EMERGENCY FIRST AID PROCEDURES

EYES: Flush with water. SKIN: Wash with soap and water

If inhaled and effects occur, move to fresh air. If breathing is irregular, administer oxygen

SECTION 6 REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY	INCOMPATIBILITY
Stable	None
HAZARDOUS DECOMPOSITION PRODUCTS	**HAZARDOUS POLYMERIZATION**
None	Will not occur.

SECTION 7 SPILL OR LEAK PROCEDURES

STEPS TO TAKE IF MATERIAL IS RELEASED OR SPILLED

If uncontaminated, sweep up or collect, and reuse product. Product becomes slippery when wet.

WASTE DISPOSAL METHOD

Dispose of in accordance with all Federal, State and Local regulations.

NEUTRALIZING CHEMICALS

Not Applicable

R.T. Vanderbilt Company, Inc.

INDUSTRIAL MINERALS AND CHEMICALS

Material Safety Data Sheet

minusa

Section I. Chemical Product and Company Identification

Product Name/ Trade Name	NYTAL® 100HR	**Code**	30807
		CAS#	Mixture
Supplier	R. T. VANDERBILT COMPANY, INCORPORATED 30 WINFIELD STREET NORWALK, CT 06855	**In case of Emergency**	(203) 853-1400
Synonym	Industrial talc, tremolitic talc		
Chemical Name	Hydrous calcium magnesium silicate mineral mixture		
Chemical Family	Phylosilicates (structural).		
Manufacturer	R. T. Vanderbilt Company, Inc. 30 Winfield Street Norwalk, CT 06855	**Material Uses**	Additive in paints and ceramics

Protective Clothing

Section II. Composition and Information on Ingredients

Name	CAS #	% by Weight	TLV/PEL
1) tremolite (nonasbestiform)	14567-73-8	30-50	As particles not otherwise regulated (PNOR).
2) talc	14807-96-6	20-40	TWA 2 mg/m³ from respirable fraction (ACGIH) See Section XVI (OSHA)
3) serpentine (antigorite, lizardite)	12135-86-3	20-30	As particles not otherwise regulated (PNOR).
4) anthophyllite (nonasbestiform)	17068-78-9	2-10	As particles not otherwise regulated (PNOR).
5) quartz	14808-60-7	0.14	OSHA PEL: TWA respirable fraction formula: 10 mg/m³ / % SiO_2 +2 ACGIH: TWA 0.1 mg/m³ from respirable fraction
Total Product			TWA: 15 mg/m³ total dust 5 mg/m³ respirable dust (OSHA) As particles not otherwise regulated (PNOR).

Section III. Hazards Identification

Emergency Overview	Not an acute hazard. Contains quartz May cause mechanical eye or skin irritation in high concentrations. As with all mineral spills, minimize dusting during clean-up. Do not breathe dust. Prolonged inhalation may cause lung injury. Product can become slippery when wet.
Target Organs	Pulmonary System (chronic risk).

Continued on Next Page

Section IV. First Aid Measures

Eye Contact	Flush with plenty of flowing water. Get medical attention if irritation persists.
Skin Contact	Wash off with water.
Inhalation	Allow the victim to rest in a well ventilated area if high concentration is inhaled and mechanical irritation or discomfort occurs. Seek medical attention if irritation persists.
Ingestion	Unlikely to be toxic by ingestion.

Section V. Fire and Explosion Data

Flammability of the Product	Non-flammable.
Auto-Ignition Temperature	Not applicable.
Flash Points	Not applicable.
Flammable Limits	Not applicable.
Products of Combustion	Not applicable.
Fire Hazards in Presence of Various Substances	Not considered to be flammable
Explosion Hazards in Presence of Various Substances	None.
Fire Fighting Media and Instructions	Product will not burn, use appropriate extinguishing media for surrounding fires.
Special Remarks on Fire Hazards	Not available.
Special Remarks on Explosion Hazards	Not available.

Section VI. Accidental Release Measures

Small Spill	Use a vacuum to clean up spillage. If appropriate, use gentle water spray to wet down and minimize dust generation. Place in a sealed container. Material will become slippery when wet.
Large Spill	Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Avoid excessive dust generation. Use respiratory protection in high dust conditions.

Section VII. Handling and Storage

Handling and Storage Procedures	No special storage considerations. Handle in ways which minimize dust generation.

Continued on Next Page

Section VIII. Exposure Controls/Personal Protection

Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If local exhaust ventilation is used, a capture velocity of 150-200 fpm is recommended.
Personal Protection	Safety glasses. Any NIOSH approved filter dust respirator. No special skin protection required. Wash skin if mechanical irritation is experienced

Section IX. Physical and Chemical Properties

Appearance	White powder
Molecular Weight	Not available
pH (1% soln/water)	Not available
Melting/ Sublimation Point	Not available.
Specific Gravity	2.85 (Water = 1)
Volatility	Non-volatile.
Odor	None
Solubility	Insoluble in cold water.

Section X. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not applicable
Conditions of Instability	None known
Incompatibility with Various Substances	Non reactive.
Corrosivity	Not available.

Section XI. Toxicological Information

Routes of Entry	Inhalation. Ingestion.
Acute Effects	
Eye contact	Not a primary eye irritant. May cause mechanical irritation.
Skin contact	Mechanical skin irritation is possible but unlikely. Not absorbed through skin. Possible granuloma formation in open wounds (requires repeated, massive applications).
Sensitization	Not a sensitizer
Ingestion	Not an ingestion hazard.

Continued on Next Page

Inhalation	Inhalation of high concentrations may cause mechanical irritation and discomfort. Repeated exposure may cause chronic effects.
Remark	No additional remark.
Chronic Effects	CARCINOGENIC EFFECTS: See remarks. MUTAGENIC EFFECTS: None known. TERATOGENIC EFFECTS: None known. DEVELOPMENTAL TOXICITY: None known.
Remarks	TALC: Prolonged exposure to excessive airborne concentrations of talc can result in scarring of the lungs (pneumoconiosis) or of the covering of the lungs (pleural thickening). Pneumoconiosis may produce symptoms of cough or shortness of breath. Pleural thickening usually produces no symptoms. Conditions can be determined by chest radiographic examination and pulmonary function test (FEV and FVC). Bronchial irritation may cause sputum production. CRYSTALLINE SILICA: Overexposure to respirable crystalline silica dust can cause silicosis, a form of progressive pulmonary fibrosis. "Inhalable" crystalline silica (quartz) is listed by IARC as a Group I carcinogen (lung) based on "sufficient evidence" in occupationally exposed humans and sufficient evidence in animals. Crystalline silica is also listed by the NTP as a known human carcinogen. Some studies have not demonstrated a cancer association and considerable controversy exists concerning the IARC and NTP classification. New York State talc has been tested as a whole and in parts in several animal studies with no carcinogenic association demonstrated. Epidemiologic studies in humans have been interpreted in conflicting ways with no clear evidence of an increased risk in lung tumors in association with exposure. Human, animal and in-vitro tests of basic product ingredients (talc and nonasbestiform tremolite) do not show a carcinogenic effect. All tremolite is of the nonasbestiform, common cleavage fragment variety. Excessive exposure to any dust may aggravate pre-existing respiratory conditions.

Section XII: Ecological Information

Ecotoxicity	None known.
BOD5 and COD	Not available.
Products of Biodegradation	None known.
Toxicity of the Products of Biodegradation	None known.
Special Remarks on the Products of Biodegradation	Not available

Section XIII: Disposal Considerations

Waste Information	Not a US RCRA hazardous waste. Dispose of in accordance with state and local regulations.

Section XIV: Transport Information

DOT Not a DOT controlled material (United States).

Continued on Next Page

Not applicable.

Maritime Transportation Not available

Section XV. Other Regulatory Information and Pictograms

TSCA Listed.

Federal and State Regulations

OSHA. Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

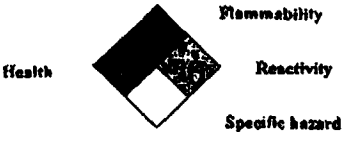
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: quartz
Pennsylvania RTK: talc; anthophyllite (nonasbestiform); quartz
Florida: tremolite (nonasbestiform); talc; quartz
Minnesota: talc; quartz
Massachusetts RTK: talc; quartz
TSCA 8(b) inventory: NYTAL® 100HR

Hazardous Material Information System (U.S.A.)

Health Hazard *	0
Fire Hazard	0
Reactivity	0
Personal Protection	E

* Chronic Potential

National Fire Protection Association (U.S.A.)



Protective Clothing (Pictograms)

Section XVI. Other Information

References Not available.

Other Special Considerations

Quartz (none detected to less than 1.0% - this quartz range is "typical" and may change slightly with different lots.)

Numerous samples for airborne concentrations of free silica during talc processing consistently reflect free silica levels in the <0.05 mg/m3 range (if detected at all).

Talc PEL: The current OSHA PEL remains 20 mppfc. Due to antiquated particle counting technique, the gravimetric (ACGIH) limit is recommended.

Validated by Sue Kelly on 5/18/2000.

Verified by Sue Kelly.

Printed 5/18/2000.

Information Contact John Keise (203) 853-1400 ext. 217
Corporate Risk Management

Notice to Reader

Continued on Next Page

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Information presented herein has been compiled from sources considered to be dependable and is accurate and reliable to the best of our knowledge and belief but is not guaranteed to be so. Nothing herein is to be construed as recommending any practice or any product in violation of any patent or in violation of any law or regulation. It is the user's responsibility to determine for himself the suitability of any material for a specific purpose and to adopt such safety precautions as may be necessary. We make no warranty as to the results to be obtained in using any material and, since conditions of use are not under our control, we must necessarily disclaim all liability with respect to the use of any material supplied by us.

SPINKS CLAY COMPANY, INC.

P. O BOX 820
PARIS, TN 38242
ph. (901) 642-5414 fax (901) 642-5493

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

PRODUCT: Ball Clay (CAS# 1332-58-7)
TRADE NAME: Various*
CHEMICAL NAME: Hydrous Aluminum Silicate
CHEMICAL FAMILY: Kaolinite
FORMULA: Al_2O_3-$2SiO_2$-$2H_2O$+impurities

EMERGENCY TELEPHONE NUMBER: Spinks (901) 642-5414
DATE REVISED: January 28, 2000

* The information contained in this MSDS is applicable to all Spinks non-slurry ball clay products.

II. HAZARDOUS INGREDIENTS

COMPONENT	CAS#	PERCENT	ACGIH-TLV	OSHA-PEL
Crystalline Silica (Quartz)	14808-60-7	5-30%	0.05 mg/m³	0.1 mg/m³
Titanium Dioxide	13463-67-7	< 3%	10 mg/m³	15 mg/m³
Clay Dust (as a whole)				10 mg/m³ ÷ (%SiO_2 ÷ 2)

The limits listed above are for the respirable fraction of each contaminant.
The exposure limits are based on a TWA for an eight- (8) hour shift/ 40-hour week.

This product may contain trace amounts of 2,3,7,8 TCDD (dioxin). Test results indicate concentrations in the in the low part per trillion(ppt) range can be expected. Typically these concentrations are below 100 ppt.

III. HEALTH HAZARD DATA

CARCINOGENICITY INFORMATION: (silica)

OSHA REGULATED: Yes NTP LISTED: Yes IARC LISTED: Yes

WARNING! This product contains crystalline silica. IARC Monograph Volume 68, 1997 concludes " There is sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica in the form of quartz or cristobalite from occupational sources." IARC classification - Group 1.

The National Toxicology Program (NTP), in the 6th Annual Report on Carcinogens, 1991, has included crystalline silica on its list of substances that are "reasonably anticipated to be carcinogens"

NIOSH has identified crystalline silica as a *Potential Occupational Carcinogen* using the OSHA classification system outlined in 29 CFR 1990.103.

WARNING! This product contains titanium dioxide. NIOSH has identified titanium dioxide as a potential occupational carcinogen.

ROUTES OF ENTRY	HEALTH EFFECTS
EYES	Contact may cause irritation and temporary discomfort.
INHALATION	Primary route of exposure! Symptoms of acute exposure include coughing, wheezing, difficult breathing, and upper respiratory track irritation. Prolonged and repeated exposure to concentrations in excess of the TLV or PEL may contribute to delayed respiratory complications
INGESTION	No information available.
SKIN	None expected, but constant contact may cause irritation.

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IV. FIRST AID AND EMERGENCY PROCEDURES

INHALATION: Move away from exposure into fresh air conditions. If breathing difficulties continue consult a physician.

EYE CONTACT: Flush with water immediately. Consult a physician if irritation persists.

IF SWALLOWED: None believed to be necessary for coincidental ingestion. Consult a physician for ingestion of large quantities.

SKIN CONTACT: Wash with mild soap and water.

V. PHYSICAL AND CHEMICAL CHARACTERISTICS

APPEARANCE:	A solid of various shades of white, gray and black		
ODOR:	Earthy odor		
BOILING POINT:	NA	VAPOR PRESSURE:	NA
MELTING POINT:	NA	VAPOR DENSITY:	NA
SPECIFIC GRAVITY:	2.4 - 2.6	EVAPORATION RATE:	NA
SOLUBILITY IN WATER:	Insoluble	PERCENT VOLATILITY:	NA
PH:	4.0 – 8.0	VISCOSITY:	NA

VI. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:	Non-Flammable	SPECIAL FIREFIGHTING PROCEDURES:	None
EXTINGUISHING MEDIA:	NA	UNUSUAL FIRE AND EXPLOSION HAZARDS:	None Known
FLAMMABLE LIMITS:	NA		

VII. REACTIVITY DATA

STABILITY:	Stable	INCOMPATIBILITIES:	None Known
HAZARDOUS DECOMPOSITION:	None	CONDITIONS TO AVOID:	None Known
HAZARDOUS POLYMERIZATION:	Will not occur		

VIII. SPILL, LEAK AND DISPOSAL INFORMATION

SPILL AND LEAK RESPONSE: Minimize dust generation during cleanup. Vacuum or scoop spilled material into a container for reclamation or disposal.

WASTE DISPOSAL: Consult state and local authorities for disposal of products.
Ball clay is not considered a hazardous waste as defined by 40 CFR, Part 261.

IX. SPECIAL HANDLING AND PERSONAL PROTECTION INFORMATION

Avoid unnecessary product agitation to keep dust level to a minimum.
Local exhaust ventilation is recommended for dust generating processes.
Use NIOSH or MSHA approved respirators if dust concentrations exceed the TLV or PEL.
Eye wash stations are recommended in areas where this product is used.
Floors or surfaces covered with this product become extremely slippery when wet.

X. SPECIAL REGULATORY INFORMATION

California Proposition 65: Ball clay contains crystalline silica and trace amounts of 2,3,7,8 TCDD (dioxin). Both are included on the list of chemicals known to the state of California to be carcinogens or reproductive toxicants as defined by California Proposition 65.

Toxic Substances Control Act: Ball Clay is included on the TSCA inventory as a naturally occurring chemical substance, 40 CFR, Part 710.4(b).

Department of Transportation: Ball Clay is not regulated by the DOT

To the best of our knowledge the information contained herein is accurate. However there is no warranty of any kind expressed or implied, as to the completeness or accuracy thereof. Final determination of the suitability of this information for a particular use of this product is the sole responsibility of the user.

Feb.19. 2009 1:18PM SHEFFIELD POTTERY No.9886 P. 12

VICRON 2511

Material Safety Data Sheet

Specialty Minerals Inc.
Subsidiary of Minerals Technologies, Inc.
405 Lexington Avenue
New York, NY 10174-1901

Product: LIMESTONE - ADAMS

MSDS No: SMI / SMI008
Revision: 03/01/94
Date: October, 1992

National Paint and Coatings Association

Hazardous Material Identification System

HEALTH HAZARD	1 - Slight
FLAMMABILITY HAZARD	0 - Minimal
REACTIVITY HAZARD	0 - Minimal
PERSONAL PROTECTION	E - Glasses, Gloves, Dust Resp

SECTION I. MATERIAL IDENTIFICATION

Trade/Material Name: LIMESTONE - ADAMS

Description: Limestone, Calcium Carbonate

Other Designations: Vicron 15-15, Vicron 25-11, Vicron 25-12, Vicron 31-6, Vicron 31-8, Vicron 41-8, Vicron 325, Marblewhite 200, Marblewhite 325, Limestone Chips, ATF-10, ATF-20, ATF-40, AFG-10, AFG 10-40, AFG-25, Calcite Crystal, Eco-Cal 4, Eco-Cal 6, Eco-Cal 14, Eco-Cal 18, Eco-Cal 40, KFS Dust.

CAS: 1317-65-3

Chemical Name: $CaCO_3$

Wilson's RISK Scale of Material Hazards
(Scale: 1-4 higher numbers indicate increased hazard)
R 1 (Reactivity)
I 2 (Inhalation)
S 1 (Skin Contact)
K 0 (Kindling/Fire)

Manufacturer: Specialty Minerals Inc.
The Chrysler Building
405 Lexington Avenue
New York, NY 10174-1901

Phone: (413) 743-0591 Mon-Fri 7:30AM - 4:30PM
(413) 743-0598 Weekends, Holidays and 4:30PM - 7:30AM

SECTION II. INGREDIENTS AND HAZARDS

Ingredient Name:	CAS Number:	Percent:	Exposure Limits:
Limestone	1317-65-3	>99%	ACGIH TLV: 10 mg/M³ 8 hr. TWA OSHA PEL: 15 mg/M³ 8 hr. TWA Total Dust, 5 mg/M³ 8 hr. TWA Respirable
Silica - Quartz	14808-60-7	<1%	ACGIH TLV & OSHA PEL: 0.1 mg/M³ 8 hr. TWA, Respirable

Toxicity Data:
Rat, oral, LD_{50}: 6450 mg/kg.

INGREDIENTS AND HAZARDS continues on page 2

Feb.19. 2009 1:19PM SHEFFIELD POTTERY No. 9686 P. 13

Specialty Minerals Inc.
Subsidiary of Minerals Technologies Inc.
405 Lexington Avenue
New York, NY 10174-1901

Product: LIMESTONE - ADAMS

MSDS No: SMI / SMI008
Revision: 03/01/94
Date: October, 1992

INGREDIENTS AND HAZARDS continued from page 1

Rabbit, skin: 500 mg administered for 24 hr produces moderate skin irritation.
Rabbit, eye: 750 µg administered for 24 hr produces severe irritation.

SECTION III. PHYSICAL DATA

Appearance & Odor: White powder, no odor

Water solubility (%): Insoluble

Specific gravity (H_2O=1): 2.6-2.8

SECTION IV. FIRE AND EXPLOSION DATA

Flash Point (method): Non-combustible

Limits: LEL %: None reported **UEL %:** None reported

NFPA Fire Hazard Symbol Codes: Flammability: 0 **Health:** 1 **Reactivity:** 0 **Special:** *

Extinguishing Media: Non-combustible. As appropriate for surrounding combustibles. Water spray may be used to wet down the material to help reduce airborne particulate levels.

Autoignition Temp: None reported

Unusual fire or explosion hazards: None

Special fire-fighting procedures: Firefighters should use self-contained breathing equipment to protect against the products of combustion. Avoid excessive dust generation.

* The NFPA Guidebook does not list Limestone. These values were determined by Specialty Minerals Inc.

SECTION V. REACTIVITY DATA

Material is stable Hazardous polymerization will not occur

Chemical incompatibilities: Reacts with acid to liberate carbon dioxide gas.

Conditions to avoid: Avoid excessive dust generation and contact with acids and other incompatibles.

Hazardous decomposition Products: Thermal oxidative decomposition of dolomitic limestone can produce dolomitic quicklime.

MSDS SMI008 continues on page 3

Feb.19. 2009 1:19PM SHEFFIELD POTTERY No.9886 P. 14

Specialty Minerals Inc.
Subsidiary of Minerals Technologies Inc.
405 Lexington Avenue
New York, NY 10174-1901

Product: LIMESTONE - ADAMS

MSDS No: SMI / SMI008
Revision: 03/01/94
Date: October, 1992

SECTION VI. HEALTH HAZARD INFORMATION

Summary of risks: Dust may cause mechanical irritation to eyes, skin and respiratory tract.

Medical conditions which may be aggravated by contact: None reported

Target organs: Lungs

Primary entry route(s): Inhalation, eye and skin contact.

Acute effects: Abrasiveness may cause eye and skin irritation.

Chronic effect(s): Long term overexposure to silica causes silicosis, a form of pulmonary fibrosis. Continued exposure to silica can lead to cardiopulmonary impairment.

First aid:

Eye contact: Flush eyes with plenty of water for at least 15 minutes. If irritation persists, seek medical attention.

Skin contact: Wash from skin with mild soap and water.

Inhalation: Remove from the exposure area.

Ingestion: Ingestion should not cause any significant health problems. If a large amount is ingested and if conscious, give large quantities of water to induce vomiting. Get medical attention.

Crystalline silica has been reviewed by IARC. IARC found limited evidence for carcinogenicity of crystalline silica in humans and sufficient evidence in experimental animals.

Canadian WHMIS Classification - Class D, Division 2, Subdivision A

SECTION VII. SPILL, LEAK AND DISPOSAL PROCEDURES

Spill / Leak procedures: Those involved in clean-up of spills should use respiratory protection for airborne dust. Vacuum or scoop up spilled material for recovery or disposal, avoiding dusting conditions and using good ventilation. Wetting the spill with a water spray may help to keep the airborne dust levels down.

CERCLA, 40 CFR 117, 302 - Notification of spills of this product is not required.

Waste management / Disposal: If this product becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D. State or local hazardous waste regulations may apply if they are different from the Federal regulations.

For transportation emergencies, call CHEMTREC, 24 hour information service, 1-800-424-9300.

TSCA Status: All ingredients in this product are either naturally occurring or are

 SPILL, LEAK AND DISPOSAL PROCEDURES continues on page 4

Feb.19. 2009 1:19PM SHEFFIELD POTTERY No.9686 P. 15

Specialty Minerals Inc.
Subsidiary of Minerals Technologies Inc.
405 Lexington Avenue
New York, NY 10174-1901

Product: LIMESTONE - ADAMS

MSDS No: SMI / SMI008
Revision: 03/01/94
Date: October, 1992

SPILL, LEAK AND DISPOSAL PROCEDURES continued from page 3

included in EPA's Toxic Substance Control Act Inventory of Chemical substances.

SARA/Superfund Amendments and Reauthorization Act of 1986.
Section 302 - This product does not contain ingredients listed in Appendix A and B as an Extremely Hazardous Substance.
Sections 311 and 312 - This product does contain substances regulated under 29 CFR 1910.1200 (OSHA Hazard Communication).
Section 313 - This product does not contain toxic chemicals subject to the reporting requirements of 40 CFR 372.

Canadian DSL - All of the ingredients in this product are either naturally occurring substances as defined in the Canadian Environmental Protection Act and are therefore considered to be listed on the Domestic Substances List or are listed on the Domestic Substances List as published by Environment Canada on January 26, 1992.

SECTION VIII. SPECIAL PROTECTION INFORMATION

Personal protective equipment:

Goggles: Safety glasses or dust-tight goggles.

Gloves: Leather or rubber gloves.

Respirator: If exposure limits are exceeded, a NIOSH approved dust respirator should be used.

Workplace considerations:

Ventilation: Provide adequate exhaust ventilation to meet TLV requirements. An exhaust filter system may be required to avoid environmental contamination.

Safety stations:
An eyewash station should be available to the area of use.

Other: Never eat, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

SECTION IX. SPECIAL PRECAUTIONS

Storage segregation: Avoid physical damage to containers. Store in a cool, dry, well-ventilated area away from acids.

Special handling / storage: None

Other precautions: Good industrial hygiene practice requires that employee exposure be maintained below the recommended TLV. This is preferably achieved through the provision of adequate ventilation where necessary. Where dust cannot be controlled in this way, personal respiratory protection should be employed.

California Proposition 65 - There are extremely small, but detectable amounts of

SPECIAL PRECAUTIONS continues on page 5

Feb.19. 2009 1:19PM SHEFFIELD POTTERY No.9888 P. 16

Specialty Minerals Inc.
Subsidiary of Minerals Technologies Inc.
405 Lexington Avenue
New York, NY 10174-1901

Product: LIMESTONE - ADAMS

MSDS No: SMI / SMI008
Revision: 03/01/94
Date: October, 1992

SPECIAL PRECAUTIONS continued from page 4

substances regulated under California's Safe Drinking Water and Toxic Enforcement Act (Proposition 65).
Arsenic - less than 1 ppm
Beryllium - less than 1 ppm
Cadmium - less than 2 ppm
Chromium (VI) - less than 0.1 ppm
Lead - less than 1 ppm
Mercury - less than 1 ppm
Nickel - less than 2 ppm
Crystalline Silica - less than 1%
These levels are "typical" quantities and may change slightly with different lots. The term "less than" indicates that the substance was detected, but the amount was less than the quantifiable limit.

Heavy Metals Restrictions (CONEG Model Legislation)
There are no Cadmium, Hexavalent Chromium, Lead or Mercury additives. These products incidentally contain only trace amounts of these metals, far below the final 100 ppm combined level.

DOT Class: Not regulated as hazardous material by DOT.
Prepared/revised by: M. G. Larson (212) 878-1835

March 1, 1994

The data and recommendations presented herein are based upon a review of Specialty Minerals Inc. files, published MSDS's, and standard toxicological reference sources. Specialty Minerals Inc. makes no guarantee or warranty, either express or implied as to the accuracy or completeness of these data and recommendations.

End of MSDS SMI008

Feb.19. 2009 1:19PM SHEFFIELD POTTERY No. 9886 P. 17

NEW HAVEN PACKAGING, LLC
Power Melt 96 / Calcium
Chloride Pellets Solid Commercial
Deicer
Safety Data Sheet

Section 1: IDENTIFICATION

PRODUCT IDENTIFIER

Power Melt 96 / Calcium Chloride
Solid Commercial Deicer

RECOMMENDED USE OF CHEMICAL AND RESTRICTIONS ON USE

Deicing/anti-icing highways, bridges, parking lots, and other pavements.

DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Name/Address:	New Haven Packaging, LLC 8 Huntington Street, PMB 151 Shelton, CT 06484
Contact Information:	Telephone: 610-497-9390 Fax: 610-497-9524 Email: ERM@CHEMICALEQUIPMENTLABS.COM Website: WWW.NHPACK.com

EMERGENCY TELEPHONE NUMBER

CHEMTREC (800) 424-9300
Outside continental USA (703) 527-3887

Section 2: HAZARD(S) IDENTIFICATION

CLASSIFICATION ACCORDING TO OSHA HAZCOM 2012

Hazard Class	Not classified as hazardous

LABEL ELEMENTS ACCORDING TO OSHA HAZCOM 2012

There are no OSHA required label elements for this product.

CLASSIFICATION ACCORDING TO WHMIS (Canada)

Hazard Class	Not controlled
WHMIS Hazard Symbols	Not applicable
WHMIS Signal Word	Not applicable

POTENTIAL HEATH EFFECTS

Eye Contact	May cause temporary eye irritation. Corneal injury is unlikely.
Skin Contact	Repeated contact may cause slight skin irritation or dry skin.
Inhalation	may cause irritation or coughing.
Ingestion	Ingestion of large quantities may cause nausea, vomiting, diarrhea and abdominal discomfort.
Effects of repeated exposure	No effects other than described above are expected.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

COMPOSITION: Power Melt 96 / Calcium Chloride is a blend of four ice melting chemicals.

MIXTURES

Ingredient	CAS No	Wt. %
Sodium Chloride	7647-14-5	1-2%
Calcium Chloride	10043-52-4	90-97%
Potassium Chloride	7447-40-7	2-35
Strontium Chloride	10476-85-4	0-1%

Section 4: FIRST-AID MEASURES

DESCRIPTION OF FIRST AID MEASURE

Eye In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. If irritation persists, seek medical attention.

Skin As a precaution, wash skin thoroughly with soap and water. Remove and wash contaminated clothing.

Inhalation If inhaled, move to fresh are and get medical advice.

Ingestion If swallowed, give mil or water to drink and telephone for medical advice. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

MOST IMPORTANT SYMPTIOMS / EFFECTS

Eye May cause eye irritation. Symptoms may include temporary discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Skin As a precaution, wash skin thoroughly with soap and water. Remove and wash contaminated clothing.

Inhalation Inhalation of dust during handling may cause respiratory tract irritation and coughing.

Ingestion Ingestion of large quantities may cause nausea, vomiting, diarrhea and abdominal discomfort.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT

Specific treatments If you feel unwell, seek medical advice immediately. Show the label or safety data sheet to medical personnel if possible.

Section 5: FIRE FIGHTING MEASURES

FLAMMABILITY

Flash Point (close up) Nonflammable by OSHA/WHMIS criteria

Auto Ignition Not applicable

EXTINGUISHING MEDIA

Suitable Extinguishing Media Water, carbon dioxide, or dry chemical. Use extinguishing media appropriate for surrounding materials.

Unsuitable Extinguishing Media Not applicable

SPECIAL HAZARDS

Hazardous Combustion Products Normal combustion forms carbon dioxide and water

Explosion Limits Data not available. Not considered to be explosion hazard.

Unusual Fire Hazard None expected

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIERFIGHTERS

Special Protective Equipment for Firefighters

Wear NIOSH approved self-contained breathing apparatus (SCBA) with positive air pressure.

Section 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUSTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES

Avoid eye/skin contact with spilled material. Refer to Section 7 for additional handling precautions

Methods for Containment If material is dissolved, contain and/or absorb spill with inert material (e.g. sawdust, sand, vermiculite).

Methods for Cleaning-UP Scoop up material and transfer to disposal container. If needed, was spillage area with plenty of water.

Section 7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

Handling Avoid eye contact. Avoid breathing dust when handling.

PRECAUTIONS FOR SAFE STORAGE, INCLUDING ANY COMPATIBILITIES

Storage Store in tightly sealed original containers, away from direct heat and strong oxidizing agents. Do not store or handle product in systems constructed of wetted parts consisting of galvanized steel, zinc, or brass components.

Section 8: CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS

TWA PEL:	No specific limits have been established for this product. As a guideline, OSHA (United States) has established the following limits which are generally recognized for inert or nuisance dust. Particulates Not Otherwise Regulated (PNOR): 8-hour TWA of 15mg/m3 (total particulate) and 5 mg/m3 (respirable fraction).
TWA TLV:	No specific limits have been established for this product. As a guideline, ACGIH (United States) has established the following limits which are generally recognized for inert or nuisance dust. Particulates (insoluble) Not Otherwise Classified (PNOC): 8- Hour TWA limits of 10 mg/m3 (as total dust) and 3 mg/m3 (as respirable)

EXPOSURE CONTROLS

Engineering Controls	No special ventilation is usually necessary; however if operating conditions create high concentration of this material, special ventilation may be needed to keep exposure to airborne contaminants below the exposure limit.

INDIVIDUAL PROTECTIVE MEASURES/PERSONAL PROTECTIVE EQUIPMENT

Eye Protection	Safety glasses or goggles are recommended if eye exposure to product or dust is possible.
Skin Protection	Chemical-resistant gloves and clothing should be used if prolonged exposure is possible to prevent drying of skin.
Respiratory Protection	Breathing of dust should be avoided. If operating conditions create high airborne concentrations of this material, the use of an approved respirator is recommended.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	White to off white solid pellets
ODOR	Odorless
ODOR THRESHOLD	No data available
Ph (20°C, 68°F)	9
MELTING POINT	772°c
BOILING POINT	1670°c
FLASH POINT	Not applicable
EVAPORATION RATE	No data available
FLAMMABILITY/EXPLOAION LIMITS	Not applicable
VAPOR PRESSURE (20°c)	Not applicable
VAPOR DENSITY (AIR = 1)	Not applicable
RELATIVE DENSITY	No data available
SOLUBILITY IN WATER	Partially soluble
PARTITION COEFFICIENT; n-OCTANOL/WATER	No data available
AUTO-IGNITION TEMPERATURE	No data available
DECOMPOSITION TEMPERATURE	No data available
VISCOSITY (20°C)	Not applicable
OXIDIZING PROPERTIES	Not oxidizing
EXPLOSIVE PROPERTIES	Not explosive

Section 10: STABILITY AND REACTIVITY

REACTIVITY
No dangerous reactions known under conditions of normal use.

CHEMICAL STABILITY
Stable. Polymerization will not occur.

POSSIBLITY OF HAZARDOUS REACTIONS
Avoid prolonged contact with reactive metals such as magnesium and zinc, especially in closed systems where hydrogen gas from the oxidation of these materials may accumulate over time.

INCOMPATIBLE MATERIALS
Strong oxidizing agents; strong acids.

HAZARDOUS DECOMPOSITION PRODUCTS
May decompose into oxides of carbon.

Section 11: TOXICOLOGICAL INFORMATION

ACURTE TOCICITY

LD50 rat-oral: 300 mg/kg
LC50 rat-inhalation: >5000 mg/m3
LD50 rat-dermal: >5000 mg/kg
Dermal irritation rabbit: Non-irritating
Ocular irritation rabbit: Moderate redness/discharge and some swelling of iris at 1 hr.; insignificant signs of irritation at 24 hr.; all signs cleared at 72 hr.
Sub-chronic oral: No effects after 28 consecutive days dosing at 100 mg/kg/day.

LIKELY ROUTES OF EXPOSURE

Skin contact, eye contact, ingestion

SYMPTOMS RELATED TO THE PHYSICAL, CHEMICAL, AND TOXICOLOGICAL CHARACTERISTICS

Eye	May cause eye irritation. Symptoms may include temporary discomfort or pain, excess blinking and tear production, with possible redness and swelling.
Skin	May cause itching or irritation of any cut or abraded skin. Symptoms of prolonged contact may include dry skin.
Inhalation	Inhalation of dust during handling may cause respiratory tract irritation and coughing. This product is not otherwise expected to be an inhalation hazard.
Ingestion	Ingestion of large quantities may cause nausea, vomiting, diarrhea and abdominal discomfort.

DELAYED AND IMMEDIATE EFFECTS AND CHRONIC EFFECTS FROM SHORT- AND LONG-TERM EXPOSURE/NUMERICAL MEASURES OF TOXICITY

Skin Corrosion/Irritation	Based on available data, the classification criteria are not met.
Serious Eye Damage/Irritation	Based on available data, the classification criteria are not met.
Respiratory or Skin Sensitization	Based on available data, the classification criteria are not met.
Germ Cell Mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	This product does not contain any ingredients that are considered to be carcinogens by IARC, NTP, or OSHA.
Reproductive Toxicity	Based on available data, the classification criteria are not met.
STOT-Single Exposure	Based on available data, the classification criteria are not met.
STOT-Repeated Exposure	Based on available data, the classification criteria are not met.
Aspiration Hazard	Based on available data, the classification criteria are not met.

Section 12: ECOLOGICAL INFORMATION

ECOTOXICITY (AQUATIC AND TERRESTRIAL)

Eco toxicity in water (LC50): 100mg/l 96hours.

PERSISTANCE AND DEGRADABILITY

Readily biodegradable. COD (TOD): 0.75 g O2/g deicer; BOD20 (2°c): 0.40 g O2/g deicer, BOD20 (10°C): 0.67

BIOACCUMULATIVE POTENTIAL

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Section 13: DISPOSAL CONSIDERATIONS

WASTE TREATMENT AND METHODS OF DISPOSAL

Based on available information, this product is neither listed as a hazardous waste nor does it exhibit any of the characteristics that would cause it to be classified as a characterized waste under RCRA. This product may be absorbed onto suitable materials and disposed of in a sanitary landfill unless local, state, or provincial regulations prohibit such disposal.

Section 14: TRASPORT INFORMATION

TRANSPORT INFORMATION

Not regulated as dangerous goods per US DOT or IATA.

Section 15: REGULATORY INFORMATION

INVENTORY LISTS

All of the components in this product are on the following inventory lists: USA (TSCA), Canada (DSL/NDSL), Europe (EINECS)

TSCA SECTION 12(b)

None of these chemicals in this are listed under TSCA Section 12(b).

CERCLA HAZARDOUS SUBSTANCES

There is no CERCLA Reportable Quantity for this material

SARA 311 CATEGORIES

Immediate (Acute) Health Hazard:	Yes
Delayed (Chronic) Health Hazard:	No
Fire Hazard:	No
Sudden Release of Pressure Hazard:	No
Reactivity Hazard:	No

SARA 313

None of the components in this product are subject to reporting under SARA Section 313.

CLEAN WATER ACT

None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

STATE RIGHT-TO-KNOW

This product does not contain components at levels which are required to be reported under the statues of the following: PA, MA, MN, and NJ.
This product does not contain materials known to the State of California (Proposition 65) to cause cancer and/or reproductive harm at levels which would require a warming under the statue.

NFPA 704	
Health	2
Fire	0
Physical Hazard	2
Hazard Rating: 0-4 0-least hazardous; 4-most hazardous	

HMIS – Hazardous Materials Identification System	
Health	2
Fire	0
Physical Hazard	1
Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = serious, 4 = severe	

Section 16: OTHER INFORMATION

SDS REVISION DATE

Revision date: May 1, 2016

Expiration date: May 1, 2019

Latest version of this SDS can be obtained from New Haven Packaging, LLC

NOTE TO EMPLOYER

This Safety Data Sheet contains environmental, health and toxicology information for your employees. Please ensure this information is provided to them. It also contains information to help you meet community right-to-know/emergency response reporting requirements under SARA Title III and many other laws. If you resell this product, this SDS must be given to the buyer or the information incorporated in you SDS. Discard any previous edition of this SDS.

DISCLAMIER

The above information is accurate to the best of our knowledge. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use or misuse are beyond our control, New Haven Packaging, LLC makes no warranty, either express or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for the reliance thereon. New Haven Packaging, LLC assumes no responsibility for any injury or loss resulting from the use of the product described herein. User should satisfy himself that he has all current data relevant to his particular use.

End of Safety Data Sheet

MATERIAL SAFETY DATA SHEET
(Prepared According to 29 CFR 1910.1200)

SECTION 1 - PRODUCT IDENTIFICATION

Distributor MKG Sales Associates, Inc.	Emergency Phone (609) 953-4700
Address 130 Miller Road - Medford Industrial Park Medford, NJ 08055	
Trade Name POWER PLUS RTU	Product Type Cleaner/Degreaser

SECTION 2 - HAZARDOUS INGREDIENTS

CHEMICAL NAME/COMMON NAME	CAS NO.	PERCENT(optional)	TLV(Source)
2-Butoxyethanol *	111-76-2	5-10	50 ppm(skin)TWA (OSHA);20 ppm(skin)(ACGIH)
Sodium Metasilicate	6834-92-0		Not Established

SARA HAZARD TITLE III,SECTION 313-CONTAINS THE STARRED INGREDIENT(S) AT THE INDICATED PERCENTAGES

Other ingredients in this product are : [X] Less than 1% by weight or less than 0.1% for carcinogens [X] Not hazardous [X] Declared to be Trade Secret

SECTION 3 - PHYSICAL DATA

Boiling point(°F.) Near 212 | Specific Gravity(H2O=1.0) (± 0.005) 1.030 | pH (± 0.5) 12.5

Vapor Pressure(mm Hg) Unknown | Vapor Density(Air=1) Unknown

Solubility in water [X] Complete [ ] Insoluble [ ] Emulsifiable (or Dispersible) [ ] Slight (or Partial)

Evaporation Rate(vs. H2O) [ ] Faster [ ] Slower [X] About the Same

Appearance and Odor Liquid, "butyl" odor

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

Flash Point(T.C.C.) °F. [X] None to Boiling | Flammable Limits Upper Unknown Lower Unknown

Extinguishing Media CO2, dry chemical, foam, water spray.

Special Firefighting Procedures Do not enter confined fire-spaces without protective clothing and self-contained air supply.

Unusual Fire and Explosion Hazards None known.

SECTION 5 - REACTIVITY DATA

Stability Stable | Incompatibility Strong oxidizers

Hazardous Decomposition Products Carbon monoxide and other unidentified organic gases may occur during incomplete combustion.

SECTION 6 - HEALTH HAZARDS

Primary Routes of Exposure [X] Eye [X] Skin [X] Oral [X] Inhalation [ ] Other

Signs and Symptoms of Overexposure (Acute) Prolonged contact of concentrated product with skin and/or eyes will cause irritation. Swallowing may irritate mouth, throat or stomach. Possible vomiting or diarrhea may occur. Contains materials which penetrate skin readily. Ingestion, prolonged or widespread contact of product in its concentrated form may result in potentially harmful absorption. Nausea/dizziness may result from breathing vapors of concentrated product in enclosed/confined spaces, where inadequate ventilation may occur.

Signs and Symptoms of Overexposure(Chronic) None known

Medical Conditions Aggravated by Overexposure None known | Carcinogen/Suspect Carcinogen Ingredients [ ] NTP [ ] OSHA [ ] IARC [X] NONE

SECTION 7 - EMERGENCY AND FIRST AID PROCEDURES

Eyes Flush immediately with water for at least 15 minutes. If persistent irritation occurs, call a physician.

Skin Wash thoroughly with soap and water.

Ingestion Drink large quantities of milk or water. Call a physician.

Inhalation Not applicable

SECTION 8 - SPECIAL PROTECTION INFORMATION

Respiratory Protection Not needed under normal conditions of use.

Ventilation Requirements [ ] Local Exhaust [X] Mechanical [ ] Room Ventilation Is Adequate

Protective Gloves Rubber | Eye Protection Safety glasses/goggles | Other Protective Clothing Not required for normal use

SECTION 9 - SPILL OR LEAK PROCEDURES

Steps to be Taken if Released or Spilled Absorb with suitable absorbent. For large spills,absorb with suitable absorbent, then shovel into containers.

Waste Disposal Methods Dispose of in accordance with applicable Federal, State and Local ordinances.

SECTION 10 - STORAGE AND HANDLING INFORMATION

Precautions to be Taken in Handling and Storage Avoid contact with skin eyes and clothing. Wash thoroughly after handling. Use with adequate ventilation.

The health hazards given on the Material Safety Data Sheet apply to this product in its concentrated form (as supplied) and may differ significantly at use dilution. The signs and symptoms of over exposure apply only to negligence in handling or misuse of the concentrated product and not to the routine exposure to the product, under normal conditions of use.

DATE PREPARED
6/30/2008

Close this window SDS

Common Name: SB-10 PAVER BOND - LOW VOC
Manufacturer: SUREBOND
SDS Revision Date: 10/5/2007
SDS Format: No Format Specified

Grainger Item Number(s): 4FFG3
Manufacturer Model Number(s):

SDS Table of Contents

Click the desired link below to jump directly to that section in the SDS.

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION
SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS
SECTION 3 - HAZARDS IDENTIFICATION
SECTION 4 - FIRST AID MEASURES
SECTION 5 - FIRE FIGHTING MEASURES
SECTION 6 - ACCIDENTAL RELEASE MEASURES
SECTION 7 - HANDLING AND STORAGE
SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION
SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES
SECTION 10 - STABILITY AND REACTIVITY
SECTION 11 - TOXICOLOGICAL INFORMATION
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SECTION 13 - DISPOSAL CONSIDERATIONS
SECTION 14 - TRANSPORT INFORMATION
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SECTION 16 - OTHER INFORMATION

SUREBOND

MATERIAL SAFETY DATA SHEET

SB-10 PAVER BOND - LOW VOC

VERSION NUMBER: 4

REVISION DATE: 10/05/07

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

top

PRODUCT NAME: SB-10 PAVER BOND - LOW VOC

COMPANY NAME:
SUREBOND
2801 INTERNATIONAL LANE
MADISON, WI 53704

PHONE: (608) 237-7554

EMERGENCY PHONE (24 HOUR):
CHEMTREC: (800) 424-9300
CHEMTREC (OUTSIDE USA): (703) 527-3887

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

top

HAZARDOUS INGREDIENT NAME	CAS NUMBER	PERCENT	TSCA
METHYL ACETATE	0079-20-9	15 - 25	Y
ACETONE	67-64-1	<5.0	Y
XYLENE	1330-20-7	<5.0	Y

NOTES: REMAINING INGREDIENTS ARE NOT CONSIDERED OSHA HAZARDOUS.

SECTION 3 - HAZARDS IDENTIFICATION

top

ROUTES OF ENTRY: ENTRY THROUGH INHALATION AND SKIN MOST LIKELY.

EFFECTS OF EXPOSURE:

EYES: CAN CAUSE IRRITATION, REDNESS, TEARING AND BLURRED VISION.

SKIN:
PROLONGED OR REPEATED CONTACT CAN CAUSE MODERATE IRRITATION, DRYING OF THE SKIN AND DERMATITIS.

INHALATION:
EXCESSIVE INHALATION OF VAPORS CAN CAUSE RESPIRATORY IRRITATION, HEADACHE, DROWSINESS AND FATIGUE. HIGH CONCENTRATIONS OF VAPORS ARE ANESTHETIC AND MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS SUCH AS DIZZINESS.

INGESTION:
CAN CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING AND DIARRHEA.

HMIS HAZARD CODES:
HEALTH 2
FIRE 3
REACTIVITY 0
PPE B

SECTION 4 - FIRST AID MEASURES

top

EYES:
FLUSH EYES GENTLY WITH WATER FOR AT LEAST 15 MINUTES LIFTING EYELIDS OCCASIONALLY; GET PROMPT MEDICAL ATTENTION.

SKIN:
WASH THOROUGHLY WITH SOAP AND WATER; APPLY A MILD SKIN CREAM. REMOVE CONTAMINATED CLOTHING.

INHALATION:
MOVE AFFECTED PERSON TO FRESH AIR; IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN; IF BREATHING HAS STOPPED, GIVE ARTIFICIAL RESPIRATION. GET MEDICAL ATTENTION.

INGESTION: DO NOT INDUCE VOMITING. GET IMMEDIATE MEDICAL ATTENTION.

SECTION 5 - FIRE FIGHTING MEASURES

top

(FLASH, UEL, LEL FOR SOLVENT ONLY)

FLAMMABILITY CLASS: I B

FLASH POINT:
9 DEG. F (-12.78 DEG. C)
TAG CLOSED CUP

EXPLOSIVE RANGE (LEL/UEL):
LEL: 1.%
UEL: 6.5%

EXTINGUISHING MEDIA:
CARBON DIOXIDE, DRY CHEMICAL, FOAM.
USE WATER FOG TO COOL MATERIAL IN VICINITY OF FIRE.

SPECIAL FIRE-FIGHTING PROCEDURES:
USE SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN PRESSURE DEMAND WITH FULL PROTECTIVE EQUIPMENT.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
ANY CLOSED CONTAINER MAY RUPTURE WHEN EXPOSED TO EXTREME HEAT.
SOLVENT VAPORS ARE HEAVIER THAN AIR AND TRAVEL ALONG THE GROUND.
VAPORS GIVEN OFF ARE FLAMMABLE AND MAY BE IGNITED IN AIR EXPLOSIVELY.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

top

STEPS TO BE TAKEN IN CASE OF SPILL:
ELIMINATE ALL IGNITION SOURCES. VENTILATE CONFINED AREAS.
(OPEN WINDOWS AND DOORS). WEAR APPROPRIATE PROTECTIVE CLOTHING.
COVER WITH ABSORBENT. SCOOP INTO SEALABLE SAFETY CONTAINER.

SECTION 7 - HANDLING AND STORAGE

top

HANDLING AND STORAGE PRECAUTIONS:

KEEP AWAY FROM HEAT, SPARK AND FLAME.

KEEP OUT OF REACH OF CHILDREN.

KEEP CONTAINER CLOSED WHILE NOT IN USE.

DO NOT CUT OR BURN RECEPTACLES THAT HAVE CONTAINED A SOLVENT BASED PRODUCT.
DO NOT REUSE THIS CONTAINER.

USE ONLY IN A WELL VENTILATED AREA.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

top

OCCUPATIONAL EXPOSURE LIMITS:

	ACGIH TLV	ACGIH TLV-C	ACGIH STEL	OSHA STEL	OSHA PEL
METHYL ACETATE	200.00 PPM	N/EST	250.00 PPM	250.00 PPM	200.00 PPM
ACETONE	750.00 PPM	N/EST	1000.00 PPM	1000.00 PPM	750.00 PPM
XYLENE	100.00 PPM	N/EST	150.00 PPM	150.00 PPM	100.00 PPM

PERSONAL PROTECTIVE EQUIPMENT:

RESPIRATORY PROTECTION:
IF TLV OF THE PRODUCT IS EXCEEDED, A NIOSH/MSHA JOINTLY APPROVED AIR SUPPLY RESPIRATOR IS ADVISED IN THE ABSENCE OF PROPER VENTILATION. OSHA

REGULATIONS ALSO PERMIT THE USE OF OTHER TYPES OF NIOSH/MSHA RESPIRATORS UNDER SPECIFIED CONDITIONS.

(SEE YOUR SAFETY EQUIPMENT SUPPLIER FOR MORE INFORMATION).

VENTILATION:
PROVIDE SUFFICIENT MECHANICAL (GENERAL AND/OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW TLV. VENTILATE DURING APPLICATION AND CURING OF THIS PRODUCT.

PROTECTIVE CLOTHING:
RUBBER GLOVES SHOULD BE WORN WHERE SKIN CONTACT IS LIKELY. WEAR IMPERVIOUS CLOTHING AND SHOES.

EYE PROTECTION: CHEMICAL GOGGLES OR SAFETY GLASSES SHOULD BE WORN.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

top

FORM: NON-SAG MASTIC

APPEARANCE/COLOR: TAN

ODOR: SLIGHT, HYDROCARBON

SOLUBILITY (IN WATER): INSOLUBLE IN WATER

pH VALUE, +/-.3: N/A

BOILING RANGE: 135 DEG. F - 230 DEG. F (57.22 DEG. C - 110 DEG. C)

VAPOR PRESSURE (MMHg): 155 @ 68 DEG. F (20 DEG. C)

EVAPORATION RATE: 5.5 TIMES FASTER THAN n-BUTYL ACETATE

VAPOR DENSITY: HEAVIER THAN AIR

% VOLATILE, WEIGHT: 30%

% VOLATILE, VOLUME: 40%

SPECIFIC GRAVITY: 1.22493

VOC (LESS H2O OR EXEMPT): <50 G/L, (3%)

NOTE:
BOIL RANGE, EVAPORATION RATE, VAPOR DENSITY AND PRESSURE FOR SOLVENT ONLY.

SECTION 10 - STABILITY AND REACTIVITY

top

STABILITY: THIS PRODUCT IS STABLE UNDER NORMAL STORAGE CONDITIONS.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR UNDER NORMAL CONDITIONS.

INCOMPATIBILITY: KEEP AWAY FROM STRONG OXIDIZING AGENTS.

CONDITIONS TO AVOID:
KEEP AWAY FROM HEAT, SPARK, OPEN FLAMES AND ANY IGNITION SOURCE.

HAZARDOUS DECOMPOSITION PRODUCTS:
WILL PRODUCE FUMES AND SMOKE CONTAINING CARBON MONOXIDE AND DIOXIDE UNDER FIRE CONDITIONS.

SECTION 11 - TOXICOLOGICAL INFORMATION

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ROUTE	SPECIES	EXPOSURE AND DOSE
METHYL ACETATE		LD50: 5000. MG/KG
XYLENE		LC50: 6700. PPM
		LD50: 4.3 PPM
		LD50: 3.95 PPM

CARCINOGENICITY:
NTP?: N/E
IARC MONOGRAPHS?: N/E
OSHA?: NO

CHRONIC HAZARDS:

NOTICE:
REPORTS HAVE ASSOCIATED REPEATED AND PROLONGED OCCUPATIONAL OVEREXPOSURE TO SOLVENTS WITH PERMANENT BRAIN, NERVOUS SYSTEM, LIVER OR KIDNEY DAMAGE OR MAY CAUSE CARDIAC ARRHYTHMIA. INTENTIONAL MISUSE OF THIS PRODUCT BY DELIBERATELY INHALING ITS VAPORS MAY BE HARMFUL OR FATAL. OVEREXPOSURE TO XYLENE MAY CAUSE INJURY TO LIVER, KIDNEY AND BLOOD.

SECTION 12 - ECOLOGICAL INFORMATION

top

NO DATA AVAILABLE.

SECTION 13 - DISPOSAL CONSIDERATIONS

top

WASTE DISPOSAL METHOD:
DISPOSE OF FOLLOWING LOCAL, STATE, AND FEDERAL REGULATIONS.

SECTION 14 - TRANSPORT INFORMATION

top

GROUND TRANSPORT (DOT) - DOMESTIC:

UNITS LESS THAN 5 L (1.3 GALLONS LIQUID) I.E. 10 OZ., 28 OZ., 1 GAL.:
PROPER SHIPPING NAME: CONSUMER COMMODITY
CLASSIFICATION: ORM-D
DOT LABEL REQUIRED: ORM-D
SHIPPING DOCUMENT: CONSUMER COMMODITY, ORM-D
ERG CODE: 171

UNITS GREATER THAN 5 L I.E. 5 GAL. PAIL:
PROPER SHIPPING NAME: ADHESIVE
CLASSIFICATION: CLASS 3
DOT LABEL REQUIRED: FLAMMABLE LIQUID, UN1133, CLASS 3
SHIPPING DOCUMENT: ADHESIVE, 3, UN1133, PGIII, FOR 50 GAL. DRUM USE PG II
ERG CODE: 128

AIR TRANSPORT (DOT) - DOMESTIC:

UNITS LESS THAN 5 L (1.3 GALLONS LIQUID) I.E. 10 OZ., 28 OZ., 1 GAL.:
PROPER SHIPPING NAME: CONSUMER COMMODITY
CLASSIFICATION: ORM-D
DOT LABEL REQUIRED: ORM-D-AIR
SHIPPING DOCUMENT: CONSUMER COMMODITY, ORM-D
ERG CODE: 171

UNITS GREATER THAN 5 L I.E. 5 GAL. PAIL:
PROPER SHIPPING NAME: ADHESIVE

CLASSIFICATION: CLASS 3
DOT LABEL REQUIRED: FLAMMABLE LIQUID, UN 1133, CLASS 3
SHIPPING DOCUMENT: ADHESIVE, 3, UN1133, PG III, FOR 50 GAL. DRUM USE PG II
ERG CODE: 128

AIR TRANSPORT (IATA) - INTERNATIONAL:

UNITS LESS THAN 5 L (1.3 GALLONS LIQUID) I.E. 10 OZ., 28 OZ., 1 GAL.:
PROPER SHIPPING NAME: CONSUMER COMMODITY
CLASSIFICATION: CLASS 9
LABEL REQUIRED: ID8000
SHIPPING DOCUMENT: CONSUMER COMMODITY, 9, ID8000
ERG CODE: 9L

UNITS GREATER THAN 5 L I.E. 5 GAL. PAIL, 50 GAL. DRUM:
PROPER SHIPPING NAME: ADHESIVE
CLASSIFICATION: CLASS 3
LABEL REQUIRED: FLAMMABLE LIQUID, UN 1133, CLASS 3
SHIPPING DOCUMENT: ADHESIVE, 3, UN1133, PGIII, FOR 50 GAL. DRUM USE PG II
ERG CODE: 3L

MARINE - OCEAN TRANSPORT (IMDG):

UNITS LESS THAN 5 L (1.3 GALLONS LIQUID) I.E. 10 OZ., 28 OZ., 1 GAL.:

PROPER SHIPPING NAME: ADHESIVE

CLASSIFICATION: CLASS 3

LABEL REQUIRED:
FLAMMABLE LIQUID, UN1133, CLASS 3, LTD. QTY.
(ON OCEAN CONTAINER ONLY, NOT REQUIRED ON CARTONS)

SHIPPING DOCUMENT: ADHESIVE, 3, UN1133, PG III, LTD. QTY.

EMS CODE: F-E, S-D

UNITS GREATER THAN 5 L I.E. 5 GAL. PAIL, 50 GAL. DRUM:
PROPER SHIPPING NAME: ADHESIVE
CLASSIFICATION: CLASS 3
LABEL REQUIRED: FLAMMABLE LIQUID, UN 1133, CLASS 3
SHIPPING DOCUMENT: ADHESIVE, 3, UN1133, PGIII, FOR 50 GAL. DRUM USE PG II
EMS CODE: F-E, S-D

SECTION 15 - REGULATORY INFORMATION

top

SARA TITLE III SECTION 313:
THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT TO KNOW ACT OF 1986 AND OF 40 CFR 372:

INGREDIENT NAME	CAS NUMBER	PERCENT
XYLENE	1330-20-7	<5.0
ETHYL BENZENE	100-41-4	TRACE

PROP 65 (CARCINOGEN):

WARNING:
THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

INGREDIENT NAME	CAS NUMBER	PERCENT
SILICA, QUARTZ	14808-60-7	TRACE

PROP 65 (TERATOGEN):

WARNING:
THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

INGREDIENT NAME	CAS NUMBER	PERCENT
TOLUENE	108-88-3	TRACE

SARA SECTION 311/312 HAZARD CATEGORIES MET:
FIRE HAZARD, IMMEDIATE (ACUTE) AND DELAYED (CHRONIC) HEALTH HAZARDS.
CHEMICAL INGREDIENTS ARE LISTED ON THE TSCA INVENTORY.

WARNING:
THIS PRODUCT CONTAINS CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

SECTION 16 - OTHER INFORMATION

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DISCLAIMER:
THE INFORMATION CONTAINED HEREIN IS BASED ON DATA AVAILABLE AS OF THE DATE OF PREPARATION OF THIS MSDS AND WHICH WE BELIEVE TO BE RELIABLE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THE DATA. WE SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS INFORMATION, OR OF ANY PRODUCT, METHOD OR APPARATUS MENTIONED. USER MUST MAKE HIS/HER OWN INVESTIGATION TO DETERMINE THE SUITABILITY OF THE INFORMATION OR PRODUCTS FOR HIS/HER PARTICULAR PURPOSE, FOR THE PROTECTION OF THE ENVIRONMENT AND THE HEALTH AND SAFETY OF THE USERS OF THIS MATERIAL.

ABBREVIATIONS:
N/A = NOT APPLICABLE
N/D = NOT DETERMINED
N/EST = NOT ESTABLISHED

SUREBOND
2801 INTERNATIONAL LANE
MADISON, WI 53704

PHONE: 608.237.7554

FAX: 608.237.7558

INFO@SUREBOND.COM

WWW.SUREBOND.COM

MATERIAL SAFETY DATA SHEET

COATINGS AND RESINS GROUP

PPG Industries, Inc.

SECTION 1 - CHEMICAL, PRODUCT, AND COMPANY INFORMATION

PRODUCT CODE/IDENTITY: 3-510

REVISION DATE: 04/12/00 (000) 0822

CUSTOMER PART #/NAME: Not applicable

PRODUCT TRADE NAME: ACRYLIC LATEX FLOOR PAINT

CHEMICAL FAMILY: Acrylic

EMERGENCY MEDICAL/SPILL INFO: (304) 843-1300 (U.S.) 91-800-00-214 (MEXICO)

TECHNICAL INFORMATION: 1-800-441-9695

PRODUCT SAFETY/MSDS INFORMATION: 4325 ROSANNA DRIVE, P.O. BOX 9 ALLISON PARK, PA 15101 (412) 492-5555

DATE OF MSDS PREPARATION: 07/31/00

PRIMARY HAZARD WARNING

Harmful if swallowed. May cause slight skin irritation. Causes eye irritation. Vapor and/or spray mist may be harmful if inhaled. Sanding and grinding dusts may be harmful if inhaled.

THIS MATERIAL SAFETY DATA SHEET HAS BEEN PREPARED IN ACCORDANCE WITH THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200), THE SUPPLIER NOTIFICATION REQUIREMENTS OF SARA TITLE III, SECTION 313, AND OTHER APPLICABLE RIGHT-TO-KNOW REGULATIONS.

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

REF	HAZARDOUS INGREDIENTS	PERCENT	CAS NUMBER	CARCINOGEN*
01	ETHYLENE GLYCOL	1 - <5	107-21-1	
02	TITANIUM DIOXIDE	10- <20	13463-67-7	
03	TALC	1 - <5	14807-96-6	
04	QUARTZ	5 - <10	14808-60-7	I N O
05	SILICA	1 - <5	7631-86-9	

* Carcinogens: O=OSHA; A=ACGIH; N=NTP; I=IARC

SARA TITLE III & CERCLA CLASSIFICATIONS

REF	SARA 102 RQ (LBS)	SARA 302 TPQ (LBS)	SARA 313	SARA 311/312 AC	CH	FL	PR	RE
01	5000	NOT ESTAB	Y	Y	Y	N	N	N
02	NOT ESTAB	NOT ESTAB	N	N	N	N	N	N
03	NOT ESTAB	NOT ESTAB	N	N	N	N	N	N

04	NOT ESTAB	NOT ESTAB	N	N	Y	N	N	N
05	NOT ESTAB	NOT ESTAB	N	N	N	N	N	N

SARA 311/312 CATEGORIES FOR THIS PRODUCT: ACUTE= Y, CHRONIC= Y, FLAMMABILITY= N, PRESSURE= N, REACTIVITY= N

OCCUPATIONAL EXPOSURE LIMITS HAVE BEEN ESTABLISHED FOR THE FOLLOWING MATERIALS:

	ACGIH		U.S. OSHA	
REF	TLV-TWA	TLV-STEL	PEL-TWA	PEL-STEL
01	C- 100 mg/m3	NOT ESTAB.	C- 50 ppm	NOT ESTAB.
02	10 mg/m3	NOT ESTAB.	10 mg/m3	NOT ESTAB.
03	R- 2 mg/m3	NOT ESTAB.	R- 2 mg/m3	NOT ESTAB.
04	R- 0.1 mg/m3	NOT ESTAB.	R- 0.1 mg/m3	NOT ESTAB.
05	10 mg/m3	NOT ESTAB.	6 mg/m3	NOT ESTAB.

[C- Ceiling Limit; S- Potential Skin Absorption; R- Respirable Dust] [NOT ESTAB. = NOT ESTABLISHED = NOT APPLICABLE]

PRODUCT STATUS RELATIVE TO THE U.S. EPA TOXIC SUBSTANCES CONTROL ACT

All chemical substances in this product are listed on the U.S. TSCA Inventory or are otherwise exempt from TSCA Inventory reporting requirements.

SECTION 3 - HAZARDS IDENTIFICATION

EFFECTS OF OVEREXPOSURE FROM:

INGESTION: Harmful if swallowed.

EYE CONTACT: Causes eye irritation.

SKIN CONTACT: May cause slight skin irritation.

INHALATION: Vapor and/or spray mist may be harmful if inhaled. Sanding and grinding dusts may be harmful if inhaled.

CHRONIC OVEREXPOSURE: Avoid long-term and repeated contact. This product contains crystalline silica which has been classified as a human carcinogen by IARC. Long-term exposures may also lead to a disabling lung condition known as silicosis. The risk depends on the duration and level of exposure to dust from sanding surfaces or mist from spray applications. Use of appropriate personal protective equipment and/or engineering controls should be employed whenever these types of operations are being performed. Ingestion of products containing ethylene glycol may damage kidneys and liver and has been shown to cause birth defects in laboratory animals. No evidence of these effects has been found in humans. This product contains titanium dioxide. Animals inhaling massive quantities of titanium dioxide dust in a long-term study developed lung tumors. Studies with humans involved in manufacture of this pigment indicate no increased risk of cancer from exposure. Potential for inhalation of titanium dioxide dusts from coatings is very limited. Since overexposures are not expected, there is no significant hazard for man. This product contains talc. In a lifetime inhalation study female rats exposed to an elevated respirable concentration (9 times the Permissible Exposure Limit) of cosmetic grade talc developed lung cancer. To date, no U.S. regulatory agency has classified talc as a carcinogen based on this data.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

WARNING: This product contains a chemical known to the State of California to cause cancer.

SECTION 4 - FIRST AID MEASURES

INGESTION: If swallowed, do not induce vomiting. Gently wipe out inside mouth to remove any residual material.

EYE CONTACT: In case of eye contact, remove contact lenses and flush eyes immediately with a gentle stream of luke warm water for at least 15 minutes.

SKIN CONTACT: In case of skin contact, flush immediately with plenty of water for at least 15 minutes followed by washing with soap and water.

INHALATION: If affected by inhalation of vapor or spray mist, remove to fresh air. Apply artificial respiration and other support measures as required.

OTHER: If ingestion, any type of overexposure or symptoms of overexposure occur during or following the use of this product, contact a poison control center, emergency room or physician immediately; have Material Safety Data Sheet information available.

SECTION 5 - FIRE FIGHTING MEASURES

FLASHPOINT: Not applicable

FLAMMABLE LIMITS: Lower explosion limit (LEL): Not available

Upper explosion limit (UEL): Not available

EXTINGUISHING MEDIA: Use extinguishers appropriate for surrounding fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat.

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable. Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye

protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

WASTE DISPOSAL METHOD: Waste material must be disposed of in accordance with federal, state, provincial, and local environmental control regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

SECTION 7 - HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS: Do not store above 120 degrees F. (48 degrees C.).

OTHER PRECAUTIONS: Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT FOR:

EYE PROTECTION: Wear safety glasses.

SKIN PROTECTION: Wear protective clothing. Gloves should be constructed of: impermeable material. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment.

RESPIRATORY PROTECTION: Where ventilation is inadequate, use a NIOSH- approved air purifying respirator with the appropriate chemical cartridges or positive-pressure, air-supplied respirator. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used.

OTHER EQUIPMENT: Clean contaminated clothing and shoes.

VENTILATION REQUIREMENTS: Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

[FORMULA VALUES, NOT SALES SPECIFICATIONS]

BOILING RANGE: 212- 471Degrees F

SOLUBILITY IN WATER: 56.9 %

VAPOR PRESSURE: 17.3 mmHg

WEIGHT/GALLON (LBS): 10.33 (U.S.)

VAPOR DENSITY: Heavier than air

pH: Not applicable

% VOLATILE/VOLUME: 69.630

% SOLIDS BY WEIGHT: 43.34

SPECIFIC GRAVITY: 1.240

EVAPORATION RATE(BuOAc=100): 34

ODOR/APPEARANCE: Viscous liquid with an odor characteristic of the solvents listed in Section 2.

SECTION 10 - STABILITY AND REACTIVITY

This product is normally stable and will not undergo hazardous reactions.

INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID): Avoid contact with strong alkalies, strong mineral acids, or strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: May produce the following hazardous decomposition products when exposed to extreme heat: oxides of aluminum ; carbon monoxide ; carbon dioxide ; lower molecular weight polymer fractions; Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

Hazardous Materials Identification System (HMIS) and National Fire Protection Association (NFPA) Ratings:

HMIS Rating		NFPA Rating	
HEALTH	1*	HEALTH	1
FLAMMABILITY	1	FLAMMABILITY	1
REACTIVITY	0	INSTABILITY	0

Rating System:0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe, *=Chronic Effects.

Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments and conditions of use.

THIS IS THE END OF THE MSDS FOR: 3-510 (00177335.0013-510)

Manufactured and Supplied by:

ARCHITECTUAL FINISHES, INC.

ONE PPG PLACE

PITTSBURGH, PA 15272

MATERIAL SAFETY DATA SHEET

COATINGS AND RESINS GROUP

PPG Industries, Inc.

SECTION 1 - CHEMICAL, PRODUCT, AND COMPANY INFORMATION

PRODUCT CODE/IDENTITY: 6-230

REVISION DATE: 10/24/95 (001) 0814

CUSTOMER PART #/NAME: Not applicable

PRODUCT TRADE NAME: GENERAL PURPOSE ALUMINUM

CHEMICAL FAMILY: Alkyd Hydrocarbon

EMERGENCY MEDICAL/SPILL INFO: (304) 843-1300 (U.S.) 91-800-00-214 (MEXICO)

TECHNICAL INFORMATION: 1-800-441-9695

PRODUCT SAFETY/MSDS INFORMATION: 4325 ROSANNA DRIVE, P.O. BOX 9 ALLISON PARK, PA 15101 (412) 492-5555

DATE OF MSDS PREPARATION: 07/31/00

PRIMARY HAZARD WARNING

Flammable. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. Extinguish all flames and pilot lights. Turn off stoves, heaters, electrical motors, and other sources of ignition during use and until all vapors/odors are gone. Harmful if swallowed. May cause moderate skin irritation. Causes eye irritation. May be absorbed through the skin. Vapor and/or spray mist may be harmful if inhaled.

THIS MATERIAL SAFETY DATA SHEET HAS BEEN PREPARED IN ACCORDANCE WITH THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200), THE SUPPLIER NOTIFICATION REQUIREMENTS OF SARA TITLE III, SECTION 313, AND OTHER APPLICABLE RIGHT-TO-KNOW REGULATIONS.

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

REF	HAZARDOUS INGREDIENTS	PERCENT	CAS NUMBER	CARCINOGEN*
01	NAPHTHA	5 - <10	64742-88-7	
02	AROMATIC NAPHTHA	1 - <5	64742-95-6	
03	ALUMINUM POWDER	5 - <10	7429-90-5	
04	NAPHTHA	40- <50	8052-41-3	
05	HYDROCARBON PETROLEUM RESIN	5 - <10	NOT ESTAB.	

* Carcinogens: O=OSHA; A=ACGIH; N=NTP; I=IARC

SARA TITLE III & CERCLA CLASSIFICATIONS

REF	SARA 102 RQ (LBS)	SARA 302 TPQ (LBS)	SARA 313	SARA 311/312 AC	CH	FL	PR	RE
				--	--	--	--	--

01	NOT ESTAB	NOT ESTAB	N	Y	N	Y	N	N
02	NOT ESTAB	NOT ESTAB	N	Y	N	Y	N	N
03	NOT ESTAB	NOT ESTAB	Y	N	N	Y	N	N
04	NOT ESTAB	NOT ESTAB	N	Y	N	Y	N	N
05	NOT ESTAB	NOT ESTAB	N	N	N	N	N	N

SARA 311/312 CATEGORIES FOR THIS PRODUCT: ACUTE= Y, CHRONIC= N, FLAMMABILITY= Y, PRESSURE= N, REACTIVITY= N

OCCUPATIONAL EXPOSURE LIMITS HAVE BEEN ESTABLISHED FOR THE FOLLOWING MATERIALS:

	ACGIH		U.S. OSHA	
REF	TLV-TWA	TLV-STEL	PEL-TWA	PEL-STEL
01	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.
02	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.
03	10 mg/m3	NOT ESTAB.	R- 5 mg/m3	NOT ESTAB.
04	100 ppm	NOT ESTAB.	100 ppm	NOT ESTAB.
05	NOT ESTAB	NOT ESTAB	NOT ESTAB	NOT ESTAB

[C- Ceiling Limit; S- Potential Skin Absorption; R- Respirable Dust] [NOT ESTAB. = NOT ESTABLISHED = NOT APPLICABLE]

PRODUCT STATUS RELATIVE TO THE U.S. EPA TOXIC SUBSTANCES CONTROL ACT

All chemical substances in this product are listed on the U.S. TSCA Inventory or are otherwise exempt from TSCA Inventory reporting requirements.

SECTION 3 - HAZARDS IDENTIFICATION

EFFECTS OF OVEREXPOSURE FROM:

INGESTION: Harmful if swallowed.

EYE CONTACT: Causes eye irritation.

SKIN CONTACT: May cause moderate skin irritation. May be absorbed through the skin.

INHALATION: Vapor and/or spray mist may be harmful if inhaled. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage.

CHRONIC OVEREXPOSURE: Avoid long-term and repeated contact.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: Eye watering, headaches, nausea, dizziness, and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

SECTION 4 - FIRST AID MEASURES

INGESTION: If swallowed, do not induce vomiting. Gently wipe out inside mouth to remove any residual material.

EYE CONTACT: In case of eye contact, remove contact lenses and flush eyes immediately with a gentle stream of luke warm water for at least 15 minutes.

SKIN CONTACT: In case of skin contact, flush immediately with plenty of water for at least 15 minutes followed by washing with soap and water.

INHALATION: If affected by inhalation of vapor or spray mist, remove to fresh air. Apply artificial respiration and other support measures as required.

OTHER: If ingestion, any type of overexposure or symptoms of overexposure occur during or following the use of this product, contact a poison control center, emergency room or physician immediately; have Material Safety Data Sheet information available.

SECTION 5 - FIRE FIGHTING MEASURES

FLASHPOINT: 87 Degrees F (30 Degrees C) (PENSKY-MARTENS CLOSED CUP)

FLAMMABLE LIMITS: Lower explosion limit (LEL): 1.0

Upper explosion limit (UEL): Not available

EXTINGUISHING MEDIA: Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA Class IC flammable liquid fires.

UNUSUAL FIRE AND EXPLOSION HAZARDS: When this product is used, the overspray and other combustible materials such as paint booth filters, rags, masking materials, etc., contaminated by coating material are subject to spontaneous combustion. Wetting the contaminated materials and not packing them tightly together in refuse containers will minimize the potential for this to occur. Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat.

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable. Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

WASTE DISPOSAL METHOD: Waste material must be disposed of in accordance with federal, state, provincial, and local environmental control regulations. Empty containers should be recycled or disposed of through an approved waste

management facility.

SECTION 7 - HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS: Do not store above 120 degrees F.(48 degrees C.). Store large quantities in buildings designed and protected for storage of NFPA Class IC flammable liquids.

OTHER PRECAUTIONS: Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT FOR:

EYE PROTECTION: Wear chemical-type splash goggles when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapors.

SKIN PROTECTION: Wear protective clothing to prevent skin contact. Apron and gloves should be constructed of: neoprene rubber or nitrile rubber. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment.

RESPIRATORY PROTECTION: Overexposure to vapors may be prevented by ensuring proper ventilation controls, vapor exhaust or fresh air entry. A NIOSH- approved air purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may also reduce exposure. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used.

OTHER EQUIPMENT: Clean contaminated clothing and shoes.

VENTILATION REQUIREMENTS: Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

[FORMULA VALUES, NOT SALES SPECIFICATIONS]

BOILING RANGE: 310- 400Degrees F

SOLUBILITY IN WATER: .0 %

VAPOR PRESSURE: 1.5 mmHg

WEIGHT/GALLON (LBS): 7.63 (U.S.)

VAPOR DENSITY: Heavier than air

pH: Not applicable

% VOLATILE/VOLUME: 63.560

% SOLIDS BY WEIGHT: 46.22

SPECIFIC GRAVITY: .916

EVAPORATION RATE(BuOAc=100): 16

ODOR/APPEARANCE: Viscous liquid with an odor characteristic of the solvents listed in Section 2.

SECTION 10 - STABILITY AND REACTIVITY

This product is normally stable but may undergo hazardous reactions at extremely high temperatures and pressures.

INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID): Avoid contact with strong alkalies, strong mineral acids, or strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: May produce the following hazardous decomposition products when exposed to extreme heat: carbon monoxide ; carbon dioxide ; oxides of aluminum ; lower molecular weight polymer fractions; Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

Hazardous Materials Identification System (HMIS) and National Fire Protection Association (NFPA) Ratings:

HMIS Rating		NFPA Rating	
HEALTH	2	HEALTH	2
FLAMMABILITY	3	FLAMMABILITY	3
REACTIVITY	1	INSTABILITY	1

Rating System:0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe, *=Chronic Effects.

Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments and conditions of use.

THIS IS THE END OF THE MSDS FOR: 6-230 (00034739.9936-230)

Manufactured and Supplied by:

ARCHITECTUAL FINISHES, INC.

ONE PPG PLACE

PITTSBURGH, PA 15272

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Material Safety Data Sheet

Date of issue 2 June 2009
Version 31.01

1 . Product and company identification

Product name : EGGSHELL LTX INT WHITE/PASTEL

Code : 6-411

Supplier : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)

Technical Phone Number : 1-800-441-9695 (8:00 am to 5:00 pm EST)

2 . Hazards identification

Emergency overview : WARNING!

CAUSES RESPIRATORY TRACT AND EYE IRRITATION. MAY BE HARMFUL IF INHALED OR SWALLOWED. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled. Irritating to respiratory system. Can irritate eyes, nose, mouth and throat.

Ingestion : May be harmful if swallowed.

Skin : No known significant effects or critical hazards.

Eyes : Irritating to eyes.

Over-exposure signs/symptoms

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Ingestion : No specific data.

Skin : No specific data.

Eyes : Adverse symptoms may include the following:
pain or irritation
watering
redness

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See toxicological information (section 11)

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3 . Composition/information on ingredients

Name	CAS number	%
titanium dioxide	13463-67-7	10 - 30
Limestone	1317-65-3	3 - 7
Nepheline syenite	37244-96-5	1 - 5
kaolin	1332-58-7	1 - 5
Diatomaceous earth	61790-53-2	0.5 - 1.5
ethanediol	107-21-1	0.1 - 1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do not use solvents or thinners.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous combustion products : Decomposition products may include the following materials:
carbon oxides
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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6 . Accidental release measures

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Do not swallow. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store below the following temperature: 32F / 0C.

8 . Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
titanium dioxide	TWA STEL	10 mg/m³ Not established	15 mg/m³ TD Not established	10 mg/m³ TD Not established	10 mg/m³ (as Ti) 20 mg/m³ (as Ti)	Not established Not established
Limestone	TWA STEL	Not established Not established	5 mg/m³ R 15 mg/m³ TD Not established	10 mg/m³ TD Not established	10 mg/m³ 20 mg/m³	Not established Not established
Nepheline syenite	TWA	10 MG/M3 TD 3 MG/M3 R	15 mg/m3 TD 5 mg/m3 R 15 mg/m3	10 mg/m³ TD	Not established	Not established
kaolin	TWA STEL	2 mg/m³ R Not established	5 mg/m³ R 15 mg/m³ TD Not established	2 mg/m³ R TD Not established	10 mg/m³ 20 mg/m³	Not established Not established
Diatomaceous earth	TWA	Not	80 mg/m³ Z	10 mg/m³ TD	10 mg/m³	Not

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8 . Exposure controls/personal protection

		established	20 mppcf Z	3 mg/m³ R TD		established
ethanediol	STEL	100 mg/m³ C	Not established	100 mg/m³ C	100 mg/m³ C	Not established

Key to abbreviations

A	=	Acceptable Maximum Peak	S	=	Potential skin absorption
ACGIH	=	American Conference of Governmental Industrial Hygienists.	SR	=	Respiratory sensitization
C	=	Ceiling Limit	SS	=	Skin sensitization
F	=	Fume	TD	=	Total dust
IPEL	=	Internal Permissible Exposure Limit	TLV	=	Threshold Limit Value
OSHA	=	Occupational Safety and Health Administration.	TWA	=	Time Weighted Average
R	=	Respirable	Z	=	OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes : Safety glasses with side shields.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Respiratory : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

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9 . Physical and chemical properties

Physical state	:	Liquid.
Flash point	:	Closed cup: >93.33°C (>200°F)
Color	:	Not available.
Odor	:	Not available.
pH	:	Not available.
Boiling/condensation point	:	>37.78°C (>100°F)
Melting/freezing point	:	Not available.
Specific gravity	:	1.31
Density (lbs / gal)	:	10.93
Vapor pressure	:	2.3 kPa (17.4 mm Hg)
Vapor density	:	Not available.
Volatility	:	63% (v/v), 48.62% (w/w)
Odor threshold	:	Not available.
Evaporation rate	:	35 (butyl acetate = 1)
Octanol/water partition coefficient	:	Not available.
% Solid. (w/w)	:	51.38

10 . Stability and reactivity

Stability	:	Stable under recommended storage and handling conditions (see section 7).
Conditions to avoid	:	No specific data.
Materials to avoid	:	Reactive or incompatible with the following materials:,water,acids
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization	:	Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
titanium dioxide	LD50 Oral	Rat	>10 g/kg	-
kaolin	LD50 Oral	Rat	>5000 mg/kg	-
ethanediol	LD50 Oral	Rat	4700 mg/kg	-
	LD50 Dermal	Rabbit	9.53 g/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Target organs : Contains material which causes damage to the following organs: lungs, eyes. Contains material which may cause damage to the following organs: upper respiratory tract, skin, stomach.

Carcinogenicity

Conclusion/Summary : Not available.

Carcinogenicity : Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA

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11 . Toxicological information

titanium dioxide	A4	2B	-	-	-	-
kaolin	A4	-	-	-	-	-
Diatomaceous earth	-	3	-	-	-	-
ethanediol	A4	-	-	-	-	-

Mutagenicity

Conclusion/Summary : Not available.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity

Conclusion/Summary : Not available.

Teratogenicity : Contains material which may cause birth defects, based on animal data.

Reproductive toxicity

Conclusion/Summary : Not available.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
titanium dioxide	Acute LC50 5.5 ppm Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 1 ppm Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
ethanediol	Acute LC50 8050000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
	Acute LC50 >10000000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 6090000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

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14 . Transport information

Regulation	UN number	Proper shipping name	Classes	PG*	Additional information
UN	None.	Not regulated.	None.	-	-
IMDG	None.	Not regulated.	None.	-	-
DOT	None.	Not regulated.	Not available.	-	-

PG* : Packing group

Reportable quantity RQ : CERCLA: Hazardous substances.: No products were found.

15 . Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.
Australia inventory (AICS) : At least one component is not listed.
Canada inventory : All components are listed or exempted.
China inventory (IECSC) : All components are listed or exempted.
Europe inventory : All components are listed or exempted.
Japan inventory (ENCS) : At least one component is not listed.
Korea inventory (KECI) : All components are listed or exempted.
New Zealand : Not determined.
Philippines inventory (PICCS) : Not determined.

United States

U.S. Federal regulations : TSCA 12(b) annual export notification: No products were found.
TSCA 12(b) one-time export: No products were found.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: titanium dioxide; kaolin; Limestone
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: titanium dioxide: Immediate (acute) health hazard; kaolin: Delayed (chronic) health hazard; Limestone: Immediate (acute) health hazard
CERCLA: Hazardous substances.: No products were found.

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

Canada

WHMIS (Canada) : Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

Mexico

Classification

Flammability : 1 **Health** : 2 **Reactivity** : 0

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 2 * **Flammability** : 1 **Physical hazards** : 0
(*) - Chronic effects

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16 . Other information

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 2 **Flammability** : 1 **Instability** : 0

Date of previous issue : **No previous validation.**

Organization that prepared the MSDS : EHS

Indicates information that has changed from previously issued version.

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

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Material Safety Data Sheet

Date of issue 3 June 2009
Version 20

1 . Product and company identification

Product name : EGGSHELL LTX INT MIDTONE BASE

Code : 6-415

Supplier : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)

Technical Phone Number : 1-800-441-9695 (8:00 am to 5:00 pm EST)

2 . Hazards identification

Emergency overview : WARNING!

CAUSES RESPIRATORY TRACT AND EYE IRRITATION. MAY BE HARMFUL IF INHALED OR SWALLOWED. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled. Irritating to respiratory system. Can irritate eyes, nose, mouth and throat.

Ingestion : May be harmful if swallowed.

Skin : No known significant effects or critical hazards.

Eyes : Irritating to eyes.

Over-exposure signs/symptoms

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Ingestion : No specific data.

Skin : No specific data.

Eyes : Adverse symptoms may include the following:
pain or irritation
watering
redness

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See toxicological information (section 11)

Powered by ATRION

3 . Composition/information on ingredients

Name	CAS number	%
titanium dioxide	13463-67-7	5 - 10
Limestone	1317-65-3	5 - 10
kaolin	1332-58-7	1 - 5

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do not use solvents or thinners.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous combustion products : Decomposition products may include the following materials:
carbon oxides
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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6 . Accidental release measures

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Do not swallow. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store below the following temperature: 32F / 0C.

8 . Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
titanium dioxide	TWA	10 mg/m³	15 mg/m³ TD	10 mg/m³ TD	10 mg/m³ (as Ti)	Not established
	STEL	Not established	Not established	Not established	20 mg/m³ (as Ti)	Not established
Limestone	TWA	Not established	5 mg/m³ R 15 mg/m³ TD	10 mg/m³ TD	10 mg/m³	Not established
	STEL	Not established	Not established	Not established	20 mg/m³	Not established
kaolin	TWA	2 mg/m³ R	5 mg/m³ R 15 mg/m³ TD	2 mg/m³ R TD	10 mg/m³	Not established
	STEL	Not established	Not established	Not established	20 mg/m³	Not established

Key to abbreviations

A	= Acceptable Maximum Peak	S	= Potential skin absorption
ACGIH	= American Conference of Governmental Industrial Hygienists.	SR	= Respiratory sensitization
C	= Ceiling Limit	SS	= Skin sensitization
F	= Fume	TD	= Total dust
IPEL	= Internal Permissible Exposure Limit	TLV	= Threshold Limit Value
OSHA	= Occupational Safety and Health Administration.	TWA	= Time Weighted Average

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8 . Exposure controls/personal protection

R = Respirable

Z = OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes : Safety glasses with side shields.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Respiratory : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state : Liquid.

Flash point : Closed cup: >93.33°C (>200°F)

Color : Not available.

Odor : Not available.

pH : Not available.

Boiling/condensation point : 37.22 to 37.22°C (99 to 99°F)

Melting/freezing point : Not available.

Specific gravity : 1.19

Density (lbs / gal) : 9.93

Vapor pressure : 2.3 kPa (17.5 mm Hg)

Vapor density : Not available.

Volatility : 74% (v/v), 61.73% (w/w)

Odor threshold : Not available.

Evaporation rate : 36 (butyl acetate = 1)

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9 . Physical and chemical properties

Octanol/water partition coefficient : Not available.

% Solid. (w/w) : 38.27

10 . Stability and reactivity

Stability : Stable under recommended storage and handling conditions (see section 7).

Conditions to avoid : No specific data.

Materials to avoid : Reactive or incompatible with the following materials:,water,acids

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
titanium dioxide	LD50 Oral	Rat	>10 g/kg	-
kaolin	LD50 Oral	Rat	>5000 mg/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Target organs : Contains material which causes damage to the following organs: lungs, eyes. Contains material which may cause damage to the following organs: upper respiratory tract, skin, stomach.

Carcinogenicity

Conclusion/Summary : Not available.

Carcinogenicity : Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
titanium dioxide	A4	2B	-	-	-	-
kaolin	A4	-	-	-	-	-

Mutagenicity

Conclusion/Summary : Not available.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity

Conclusion/Summary : Not available.

Teratogenicity : No known significant effects or critical hazards.

Reproductive toxicity

Conclusion/Summary : Not available.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

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12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
titanium dioxide	Acute LC50 5.5 ppm Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 1 ppm Fresh water	Daphnia - Water flea - Daphnia magna	48 hours

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14 . Transport information

Regulation	UN number	Proper shipping name	Classes	PG*	Additional information
UN	None.	Not regulated.	None.	-	-
IMDG	None.	Not regulated.	None.	-	-
DOT	None.	Not regulated.	Not available.	-	-

PG* : Packing group

Reportable quantity RQ : CERCLA: Hazardous substances.: No products were found.

15 . Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.

Australia inventory (AICS) : At least one component is not listed.

Canada inventory : All components are listed or exempted.

China inventory (IECSC) : All components are listed or exempted.

Europe inventory : This product contains a component which may restrict import to the notifier and/or to other parties holding a concurrent notification or agreement.

Japan inventory (ENCS) : At least one component is not listed.

Korea inventory (KECI) : At least one component is not listed.

New Zealand : Not determined.

Philippines inventory (PICCS) : At least one component is not listed.

United States

U.S. Federal regulations : TSCA 12(b) annual export notification: No products were found.

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15 . Regulatory information

TSCA 12(b) one-time export: No products were found.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: kaolin; Limestone; titanium dioxide
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: kaolin: Delayed (chronic) health hazard; Limestone: Immediate (acute) health hazard; titanium dioxide: Immediate (acute) health hazard
CERCLA: Hazardous substances.: No products were found.

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

Canada

WHMIS (Canada) : Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

Mexico

Classification

Flammability : 1 **Health** : 2 **Reactivity** : 0

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 2 * **Flammability** : 1 **Physical hazards** : 0
(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 2 **Flammability** : 1 **Instability** : 0

Date of previous issue : **No previous validation.**

Organization that prepared the MSDS : EHS

Indicates information that has changed from previously issued version.

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

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PPG INDUSTRIES INC -- SPEEDHIDE ES LATEX ENAMELS, 6-G, 6-416 -- 8010-00N073309

========== Product Identification ==========

Product ID:SPEEDHIDE ES LATEX ENAMELS, 6-G, 6-416
MSDS Date:06/04/1990
FSC:8010
NIIN:00N073309
MSDS Number: CCNMM
=== Responsible Party ===
Company Name:PPG INDUSTRIES INC
Address:260 KAPPA DR
City:PITTSBURGH
State:PA
ZIP:15238
Country:US
Info Phone Num:412-963-5822
Emergency Phone Num:304-843-1300
CAGE:DO542
=== Contractor Identification ===
Company Name:PPG INDUSTRIES INC
Box:UNKNOW
CAGE:PPGND
Company Name:PPG INDUSTRIES INC. COATINGS & RESINS GP
Address:4325 ROSEANNA DR PO BOX 9
Box:9
City:ALLISON PARK
State:PA
ZIP:15101
Phone:412-492-5555
CAGE:DO542

========== Composition/Information on Ingredients ==========

Ingred Name:CLAY (KAOLIN); (ALUMINUM SILICATE)
CAS:1332-58-7
RTECS #:GF1670500
Fraction by Wt: 10-15%
OSHA PEL:15 MG/M3 TDUST
ACGIH TLV:2 MG/M3 TDUST; 9495

Ingred Name:TITANIUM OXIDE; (TITANIUM DIOXIDE)
CAS:13463-67-7
RTECS #:XR2275000
Fraction by Wt: 15-20%
OSHA PEL:15 MG/M3 TDUST
ACGIH TLV:10 MG/M3 TDUST; 9495

Ingred Name:PROPIONIC ACID,2-METHYL-, MONOESTER WITH

2,2,4-TRIMETHYL-1,3-PENTAMEDIOL; (2,2,4TRIMETHYL 1,3PENTANEDIOL ISOBUTYRATE)
CAS:25265-77-4
RTECS #:UF6000000
Fraction by Wt: 1-2%
OSHA PEL:N/K
ACGIH TLV:N/K

Ingred Name:WATER
CAS:7732-18-5
RTECS #:ZC0110000
Fraction by Wt: 50-55%
OSHA PEL:N/K
ACGIH TLV:N/K

Ingred Name:FILM FORMERS, RESINS, AND ADDITIVES
Fraction by Wt: 25-30%
OSHA PEL:N/K
ACGIH TLV:N/K

Ingred Name:SUPDAT:SO THE POTNTL HAZ FOR HUMANS IS LIM. THIS PROD CNTNS TITANIUM DIOXIDE. ANIMALS INHALING MASSIVE QTIES (ING 7)
RTECS #:9999999ZZ

Ingred Name:ING 6:OF TITANIUM DIOXIDE DUST IN A LONG TERM STUDY DEVELOPED LUNG TUMORS. STUDIES W/HUMANS INVOLVED IN MFR OF (ING 8)
RTECS #:9999999ZZ

Ingred Name:ING 7:THIS PIGMENT INDICATE NO INCREASED RISK OF CANCER FROM EXPOSURE. POTENTIAL FOR INHAL OF TITANIUM DIOXIDE (ING 9)
RTECS #:9999999ZZ

Ingred Name:ING 8:DUSTS FROM COATINGS IS VERY LIM. (ING 10)
RTECS #:9999999ZZ
Fraction by Wt: M/K

Ingred Name:ING 9:SINCE OVEREXPOS ARE NOT EXPECTED, THERE IS NO SIGNIFICANT HAZARD FOR MAN. SIGNS & SYMPTOMS OF OVEREXP: (ING 11)
RTECS #:9999999ZZ

Ingred Name:ING 10:REDNESS, ITCHING, BURNING SENSATION & VISUAL DISTURBANCES MAY INDICATE EXCESSIVE EYE CONTACT. DRYNESS, (ING 12)
RTECS #:9999999ZZ

Ingred Name:ING 11:ITCHING, CRACKING, BURNING, REDNESS, AND SWELLING ARE CONDITIONS ASSOCIATED WITH EXCESSIVE SKIN CONTACT.
RTECS #:9999999ZZ

Ingred Name:FIRST AID PROC:USE OF THIS PRODUCT. CONTACT A POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN IMMED. HAVE (ING 14)
RTECS #:9999999ZZ

Ingred Name:ING 13:MATERIAL SAFETY DATA SHEET INFORMATION AVAILABLE. INGESTION. EXCESSIVE EXPOSURE TO A CORROSIVE MATERIAL (ING 15)
RTECS #:9999999ZZ

Ingred Name:ING 14:PERSISTENT SKIN/EYE IRRITATION OR BREATHING DIFFICULTIES.
RTECS #:9999999ZZ

Ingred Name:RESP PROT:THE TYPE OF AIRBORNE CONTAMINANTS AGAINST WHICH THE RESP IS EFFECTIVE & HOW IT IS TO BE PROPERLY FITTED.
RTECS #:9999999ZZ

Ingred Name:VENT:THE LOWEST SUGGESTED EXPOS LIMITS, THE LEL IN THE & EXPLOSION HAZ DATA SECTION BELOW THE STATED LIMIT, & (ING 18)
RTECS #:9999999ZZ

Ingred Name:ING 19:TO REMOVE DECOMPOSITION PRODUCTS DURING WELDING OR FLAME CUTTING ON SURFACES COATED WITH THIS PRODUCT.
RTECS #:9999999ZZ

========== Hazards Identification ==========

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.
Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:ACUTE: INGEST:HARMFUL/FATAL IF INGEST. EYE:CAUSES EYE IRRIT. SKIN:MAY CAUSE SLIGHT SKIN IRRIT. INHAL:VAPOR & SPRAY MIST MAY BE HARMFUL IF INHALED. SANDING & GRINDING DUST MAY BE HARMFUL IF INHALED. VA POR GENERATED AT ELEVATED TEMP IRRIT EYES, NOSE & THROAT. CHRONIC: AVOID LONG TERM & REPEATED CONTACT. (EFTS OF OVEREXP)
Explanation of Carcinogenicity:NOT RELEVANT.
Effects of Overexposure:HLTH HAZ:THIS PROD CNTNS A FORM OF CRYSTALLINE SILICA WHICH IARC ASSOC W/INCREASED RISK OF CANCER IN LAB ANIMALS. LONG-TERM EXPOS TO CRYSTALLINE SILICOSIS MAY ALSO LEAD TO A DISABLING INJURY KNOWN AS SILICA. THESE EFTS ARE ASSOC W/BRTHG EXCESSIVE AMTS OF SILICA DUST. APPLICATNS OF THIS PROD IS NOT EXPECTED TO (SUPDAT)
Medical Cond Aggravated by Exposure:NOT APPLICABLE.

========== First Aid Measures ==========

First Aid:INGEST:IF SWALLOWED, DO NOT INDUCE VOMIT. EYE:IN CASE OF CNTCT, FLUSH IMMED W/PLENTY OF H*2O FOR AT LEAST 15 MIN. SKIN:IN

CASE OF CNTCT, REMOVE PROMPTLY BY WIPING, FOLLOWED BY WATERLESS HAND CLEANER & SOAP & H*2O. INHAL:IF AFFECTED BY INHAL OF VAP/SPRAY MIST, REMOVE TO FRESH AIR. APPLY ARTF RESP & OTHER SUPPORTIVE MEASURES AS REQUIRED. OTHER:IF ANY, OF THE FOLLOWING OCCUR DURING/FOLLOWING (ING 13)

Fire Fighting Measures

Extinguishing Media:USE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) CLASS B EXTINGUISHERS (CARBON DIOXIDE, DRY CHEMICAL OR UNIVERSAL(SUPDAT)

Fire Fighting Procedures:USE NIOSH APPRVD SCBA & FULL PROT EQUIP . WATER SPRAY MAY BE INEFT. WATER SPRAY MAY BE USED TO COOL CLSD CNTNRS TO PVNT PRESS BUILD-UP & POSSIBLE (SUPDAT)

Unusual Fire/Explosion Hazard:CLOSED CONTAINERS MAY EXPLODE OR BURST (DUE TO THE BUILD-UP OF STREAM PRESSURE) WHEN EXPOSED TO EXTREME HEAT.

Accidental Release Measures

Spill Release Procedures:PROVIDE MAXIMUM VENT. ONLY PERS EQUIPPED W/PROPER NIOSH APPROVED RESP & SKIN & EYE PROT SHOULD BE PERMITTED IN THE AREA REMOVE ALL SOURCES IF IGNITION. TAKE UP SPILLED MATL W/SAWDUST. VERMICULITE/OTHE R ABSORBENT MATL & PLACE INTO CNTNRS FOR DISPOSAL.

Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

Handling and Storage

Handling and Storage Precautions:DO NOT STORE ABOVE 120 DEGREES F. STORE LRG QTIES IN BUILDINGS DESIGNED & PROTECTED FOR STORAGE OF NFPA CLASS B COMBUST LIQ. PROTECT FROM FREEZING.

Other Precautions:IF THIS MATERIAL IS PART OF A MULTIPLE COMPONENT COATING SYSTEM, READ THE MATERIAL SAFETY DATA SHEET(S) FOR THE OTHER COMPONENT OR COMPONENTS BEFORE BLENDING AS THE RESULTING MIXTURE MAY HAVE THE HAZA RDS OF ALL OF ITS PARTS.

Exposure Controls/Personal Protection

Respiratory Protection:OVEREXP TO VAP MAY BE PREVENTED BY ENSURING VENT CONTROLS. VAP EXHST/FRESH AIR ENTRY. NIOSH APPRVD (TC-23C) PAINT SPRAY/AIR SUPPLIED (TC-19C) RESP MAY ALSO REDUCE EXPOS. READ RESP MFR'S INSTRUCTION & LITERATURE CAREFULLY TO DETERM (ING 16)

Ventilation:PROVIDE GEN DILUTION/LOC EXHAUST VENT IN VOL & PATTERN TO KEEP THE CONC OF INGRED LISTED IN ING SECTION BELOW (ING 17)

Protective Gloves:NITRILE, NEOPRENE, OR LATEX GLOVES.

Eye Protection:ANSI APPROVED CHEM WORKERS GOGGS .

Other Protective Equipment:EYE WASH FOUNTAIN & DELUGE SHOWER WHICH MEET

ANSI DESIGN CRITERIA . IMPERMEABLE APRON.
Work Hygienic Practices:CLEAN OR DISCARD CONTAMINATED CLOTHING AND SHOES.
Supplemental Safety and Health
EXTING MEDIA:AQUEOUS FILM FORMING FOAM) DESIGNED TO EXTINGUISH NFPA CLASS B COMBUST LIQ FIRES. FIRE FIGHT PROC:AUTOIGNITION/EXPLOSION WHEN EXPOSED TO EXTREME HEAT. IF H*2O IS USED, FOG NOZZLES ARE PRE F. HAZ DECOMP PROD:FUMES INCL: CARBON MONOXIDE. EFTS OF OVEREXP:GENERATE EXCESSIVE AMTS OF RESPIRABLE SILICA, (ING 6)

Physical/Chemical Properties

Boiling Pt:B.P. Text:>212F,>100C
Vapor Pres:<18
Vapor Density:HVR/AIR
Spec Gravity:1.20-1.32
Evaporation Rate & Reference:<34 (BUOAC=100)
Solubility in Water:<55%
Appearance and Odor:VISC LIQ W/AN ODOR CHARACT OF THE CHEM FAMILY & ANY SOLV LISTED IN SECTION II.
Percent Volatiles by Volume:<85

Stability and Reactivity Data

Stability Indicator/Materials to Avoid:YES
AVOID CONTACT WITH STRONG ALKALIES, STRONG MINERAL ACIDS, OR STRONG OXIDIZING AGENTS.
Stability Condition to Avoid:NONE SPECIFIED BY MANUFACTURER.
Hazardous Decomposition Products:MAY PRDCE HAZ DECOMP PROD WHEN HEATED. WELDING, BRAZING/FLAME-CUTTING ON SURF COATED W/THIS PRODUCT MAY PRDCE (SUPDAT)

Disposal Considerations

Waste Disposal Methods:WASTE MATERIAL MUST BE DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE, PROVINCIAL, AND LOCAL ENVIRONMENTAL CONTROL REGULATIONS. EMPTY CONTAINERS SHOULD BE RECYCLED OR DISPOSED OF THROUGH AN APPROVED WA STE MANAGEMENT FACILITY.

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MATERIAL SAFETY DATA SHEET

COATINGS AND RESINS GROUP

PPG Industries, Inc.

SECTION 1 - CHEMICAL, PRODUCT, AND COMPANY INFORMATION

PRODUCT CODE/IDENTITY: 6-417

REVISION DATE: 07/06/00 (000) 0822

CUSTOMER PART #/NAME: Not applicable

PRODUCT TRADE NAME: SPEEDHIDE INT LTX EGGSHELL NEUTRAL BASE

CHEMICAL FAMILY: Polyvinyl Acetate Acrylic

EMERGENCY MEDICAL/SPILL INFO: (304) 843-1300 (U.S.) 91-800-00-214 (MEXICO)

TECHNICAL INFORMATION: 1-800-441-9695

PRODUCT SAFETY/MSDS INFORMATION: 4325 ROSANNA DRIVE, P.O. BOX 9 ALLISON PARK, PA 15101 (412) 492-5555

DATE OF MSDS PREPARATION: 07/31/00

PRIMARY HAZARD WARNING

Harmful if swallowed. May cause slight skin irritation. Causes eye irritation. Vapor and/or spray mist may be harmful if inhaled.

THIS MATERIAL SAFETY DATA SHEET HAS BEEN PREPARED IN ACCORDANCE WITH THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200), THE SUPPLIER NOTIFICATION REQUIREMENTS OF SARA TITLE III, SECTION 313, AND OTHER APPLICABLE RIGHT-TO-KNOW REGULATIONS.

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

REF	HAZARDOUS INGREDIENTS	PERCENT	CAS NUMBER	CARCINOGEN*
01	CALCIUM CARBONATE	20- <30	1317-65-3	
02	QUARTZ	0.1- <1	14808-60-7	I N O

* Carcinogens: O=OSHA; A=ACGIH; N=NTP; I=IARC

SARA TITLE III & CERCLA CLASSIFICATIONS

REF	SARA 102 RQ (LBS)	SARA 302 TPQ (LBS)	SARA 313	SARA 311/312 AC	CH	FL	PR	RE
01	NOT ESTAB	NOT ESTAB	N	N	N	N	N	N
02	NOT ESTAB	NOT ESTAB	N	N	Y	N	N	N

SARA 311/312 CATEGORIES FOR THIS PRODUCT: ACUTE= N, CHRONIC= Y, FLAMMABILITY= N, PRESSURE= N, REACTIVITY= N

OCCUPATIONAL EXPOSURE LIMITS HAVE BEEN ESTABLISHED FOR THE FOLLOWING MATERIALS:

	ACGIH		U.S. OSHA	
REF	TLV-TWA	TLV-STEL	PEL-TWA	PEL-STEL
01	10 mg/m3	NOT ESTAB.	R- 5 mg/m3	NOT ESTAB.
02	R- 0.1 mg/m3	NOT ESTAB.	R- 0.1 mg/m3	NOT ESTAB.

[C- Ceiling Limit; S- Potential Skin Absorption; R- Respirable Dust] [NOT ESTAB. = NOT ESTABLISHED = NOT APPLICABLE]

PRODUCT STATUS RELATIVE TO THE U.S. EPA TOXIC SUBSTANCES CONTROL ACT

All chemical substances in this product are listed on the U.S. TSCA Inventory or are otherwise exempt from TSCA Inventory reporting requirements.

SECTION 3 - HAZARDS IDENTIFICATION

EFFECTS OF OVEREXPOSURE FROM:

INGESTION: Harmful if swallowed.

EYE CONTACT: Causes eye irritation.

SKIN CONTACT: May cause slight skin irritation.

INHALATION: Vapor and/or spray mist may be harmful if inhaled.

CHRONIC OVEREXPOSURE: Avoid long-term and repeated contact. This product contains crystalline silica which has been classified as a human carcinogen by IARC. Long-term exposures may also lead to a disabling lung condition known as silicosis. The risk depends on the duration and level of exposure to dust from sanding surfaces or mist from spray applications. Use of appropriate personal protective equipment and/or engineering controls should be employed whenever these types of operations are being performed.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

WARNING: This product contains a chemical known to the State of California to cause cancer.

SECTION 4 - FIRST AID MEASURES

INGESTION: If swallowed, do not induce vomiting. Gently wipe out inside mouth to remove any residual material.

EYE CONTACT: In case of eye contact, remove contact lenses and flush eyes immediately with a gentle stream of luke warm water for at least 15 minutes.

SKIN CONTACT: In case of skin contact, flush immediately with plenty of water for at least 15 minutes followed by washing with soap and water.

INHALATION: If affected by inhalation of vapor or spray mist, remove to fresh air. Apply artificial respiration and other support measures as required.

OTHER: If ingestion, any type of overexposure or symptoms of overexposure occur during or following the use of this product, contact a poison control center, emergency room or physician immediately; have Material Safety Data Sheet information available.

SECTION 5 - FIRE FIGHTING MEASURES

FLASHPOINT: Not applicable

FLAMMABLE LIMITS: Lower explosion limit (LEL): Not available

Upper explosion limit (UEL): Not available

EXTINGUISHING MEDIA: Use extinguishers appropriate for surrounding fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat.

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable. Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

WASTE DISPOSAL METHOD: Waste material must be disposed of in accordance with federal, state, provincial, and local environmental control regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

SECTION 7 - HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS: Do not store above 120 degrees F. (48 degrees C.).

OTHER PRECAUTIONS: Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT FOR:

EYE PROTECTION: Wear safety glasses.

SKIN PROTECTION: Wear protective clothing. Gloves should be constructed of: impermeable material. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment.

RESPIRATORY PROTECTION: Where ventilation is inadequate, use a NIOSH- approved air purifying respirator with the appropriate chemical cartridges or positive-pressure, air-supplied respirator. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used.

OTHER EQUIPMENT: Clean contaminated clothing and shoes.

VENTILATION REQUIREMENTS: Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

[FORMULA VALUES, NOT SALES SPECIFICATIONS]

BOILING RANGE: 212- 471Degrees F

SOLUBILITY IN WATER: 64.1 %

VAPOR PRESSURE: 17.3 mmHg

WEIGHT/GALLON (LBS): 10.36 (U.S.)

VAPOR DENSITY: Heavier than air

pH: Not applicable

% VOLATILE/VOLUME: 67.170

% SOLIDS BY WEIGHT: 45.75

SPECIFIC GRAVITY: 1.243

EVAPORATION RATE(BuOAc=100): 35

ODOR/APPEARANCE: Viscous liquid with an odor characteristic of the solvents listed in Section 2.

SECTION 10 - STABILITY AND REACTIVITY

This product is normally stable and will not undergo hazardous reactions.

INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID): Avoid contact with strong

alkalies, strong mineral acids, or strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: May produce the following hazardous decomposition products when exposed to extreme heat: carbon monoxide ; carbon dioxide ; lower molecular weight polymer fractions; Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

Hazardous Materials Identification System (HMIS) and National Fire Protection Association (NFPA) Ratings:

HMIS Rating		NFPA Rating	
HEALTH	1*	HEALTH	1
FLAMMABILITY	1	FLAMMABILITY	1
REACTIVITY	0	INSTABILITY	0

Rating System:0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe, *=Chronic Effects.

Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments and conditions of use.

THIS IS THE END OF THE MSDS FOR: 6-417 (00177368.00189-587)

Manufactured and Supplied by:

ARCHITECTUAL FINISHES, INC.

ONE PPG PLACE

PITTSBURGH, PA 15272

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Material Safety Data Sheet

Date of issue 7 June 2009
Version 23

1 . Product and company identification

Product name : SPEEDHIDE INT S/G WHITE/PASTEL

Code : 6-500

Supplier : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)

Technical Phone Number : 1-800-441-9695 (8:00 am to 5:00 pm EST)

2 . Hazards identification

Emergency overview : WARNING!

CAUSES RESPIRATORY TRACT AND EYE IRRITATION. MAY BE HARMFUL IF INHALED OR SWALLOWED. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled. Irritating to respiratory system. Can irritate eyes, nose, mouth and throat.

Ingestion : May be harmful if swallowed.

Skin : May cause skin dryness and irritation.

Eyes : Irritating to eyes.

Over-exposure signs/symptoms

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Ingestion : No specific data.

Skin : Adverse symptoms may include the following:
irritation
dryness
cracking

Eyes : Adverse symptoms may include the following:
pain or irritation
watering
redness

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone. The inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract. Ingestion may cause nausea, weakness and central nervous system effects. If splashed in the eyes, the liquid may cause irritation and reversible damage. Acrylate components of the preparation have irritating properties. Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms, such as redness, blistering, dermatitis etc. May

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2 . Hazards identification

cause allergic skin reactions with repeated exposure.

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See toxicological information (section 11)

3 . Composition/information on ingredients

Name	CAS number	%
titanium dioxide	13463-67-7	10 - 30
silicon dioxide	7631-86-9	1 - 5
aluminium hydroxide	21645-51-2	0.5 - 1.5
ethanediol	107-21-1	0.5 - 1.5
kaolin	1332-58-7	0.1 - 1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open.

In case of accidental eye contact, avoid concurrent exposure to the sun or other sources of UV light which may increase the sensitivity of the eyes.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do not use solvents or thinners.

In case of accidental skin contact, avoid concurrent exposure to the sun or other sources of UV light which may increase the sensitivity of skin.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous combustion products : Decomposition products may include the following materials:
carbon oxides
metal oxide/oxides

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5 . Fire-fighting measures

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Do not swallow. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store below the following temperature: 32F / 0C.

8 . Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
titanium dioxide	TWA	10 mg/m³	15 mg/m³ TD	10 mg/m³ TD	10 mg/m³ (as Ti)	Not established
	STEL	Not established	Not established	Not established	20 mg/m³ (as Ti)	Not established
silicon dioxide	TWA	Not established	Not established	Not established	10 mg/m³ 3 mg/m³ R	Not established
aluminium hydroxide	TWA	1 mg/m³	Not	2 mg/m³	2 mg/m³	Not

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8 . Exposure controls/personal protection

			established			established
ethanediol	STEL	100 mg/m³ C	Not established	100 mg/m³ C	100 mg/m³ C	Not established
kaolin	TWA	2 mg/m³ R	5 mg/m³ R 15 mg/m³ TD	2 mg/m³ R TD	10 mg/m³	Not established
	STEL	Not established	Not established	Not established	20 mg/m³	Not established

Key to abbreviations

A	= Acceptable Maximum Peak	S	= Potential skin absorption
ACGIH	= American Conference of Governmental Industrial Hygienists.	SR	= Respiratory sensitization
C	= Ceiling Limit	SS	= Skin sensitization
F	= Fume	TD	= Total dust
IPEL	= Internal Permissible Exposure Limit	TLV	= Threshold Limit Value
OSHA	= Occupational Safety and Health Administration.	TWA	= Time Weighted Average
R	= Respirable	Z	= OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes : Safety glasses with side shields.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Gloves : polyethylene

Respiratory : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

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9 . Physical and chemical properties

Physical state	:	Liquid.
Flash point	:	Closed cup: >93.33°C (>200°F)
Color	:	Not available.
Odor	:	Not available.
pH	:	Not available.
Boiling/condensation point	:	>37.78°C (>100°F)
Melting/freezing point	:	Not available.
Specific gravity	:	1.23
Density (lbs / gal)	:	10.26
Vapor pressure	:	2.3 kPa (17.4 mm Hg)
Vapor density	:	Not available.
Volatility	:	66% (v/v), 54.1% (w/w)
Odor threshold	:	Not available.
Evaporation rate	:	34 (butyl acetate = 1)
Octanol/water partition coefficient	:	Not available.
% Solid. (w/w)	:	45.9

10 . Stability and reactivity

Stability	:	This preparation contains materials which are unstable under the following conditions: strong UV sources free radical initiators peroxides strong alkalis strong acids reactive metals These could cause the product to polymerize exothermically. Unintentional contact with them should be avoided. Stable under recommended storage and handling conditions (see section 7).
Conditions to avoid	:	No specific data.
Materials to avoid	:	Reactive or incompatible with the following materials:,water,acids
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization	:	Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
titanium dioxide	LD50 Oral	Rat	>10 g/kg	-
ethanediol	LD50 Oral	Rat	4700 mg/kg	-
	LD50 Dermal	Rabbit	9.53 g/kg	-
kaolin	LD50 Oral	Rat	>5000 mg/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Defatting irritant? : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Target organs : Contains material which causes damage to the following organs: lungs, upper respiratory tract, central nervous system (CNS).
Contains material which may cause damage to the following organs: skin, eyes.

Carcinogenicity

Conclusion/Summary : Not available.

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11 . Toxicological information

Carcinogenicity : Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
titanium dioxide	A4	2B	-	-	-	-
silicon dioxide	-	3	-	-	-	-
aluminium hydroxide	A4	-	-	-	-	-
ethanediol	A4	-	-	-	-	-

Mutagenicity

Conclusion/Summary : Not available.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity

Conclusion/Summary : Not available.

Teratogenicity : Contains material which may cause birth defects, based on animal data.

Reproductive toxicity

Conclusion/Summary : Not available.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
titanium dioxide	Acute LC50 5.5 ppm Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 1 ppm Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
ethanediol	Acute LC50 8050000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
	Acute LC50 >10000000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 6090000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

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14 . Transport information

Regulation	UN number	Proper shipping name	Classes	PG*	Additional information
UN	None.	Not regulated.	None.	-	-
IMDG	None.	Not regulated.	None.	-	-
DOT	None.	Not regulated.	Not available.	-	-

PG* : Packing group

Reportable quantity RQ : CERCLA: Hazardous substances.: ethanediol: 5000 lbs. (2270 kg);

15 . Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.
Australia inventory (AICS) : At least one component is not listed.
Canada inventory : All components are listed or exempted.
China inventory (IECSC) : All components are listed or exempted.
Europe inventory : All components are listed or exempted.
Japan inventory (ENCS) : At least one component is not listed.
Korea inventory (KECI) : All components are listed or exempted.
New Zealand : Not determined.
Philippines inventory (PICCS) : Not determined.

United States

U.S. Federal regulations : TSCA 12(b) annual export notification: No products were found.
TSCA 12(b) one-time export: No products were found.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: aluminium hydroxide; titanium dioxide; ethanediol
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: aluminium hydroxide: Immediate (acute) health hazard; titanium dioxide: Immediate (acute) health hazard; ethanediol: Immediate (acute) health hazard, Delayed (chronic) health hazard
CERCLA: Hazardous substances.: ethanediol: 5000 lbs. (2270 kg);

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting requirements :	ethanediol	107-21-1	0.5 - 1.5

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

Canada

WHMIS (Canada) : Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

Mexico

Classification

Flammability : 1 **Health** : 2 **Reactivity** : 0

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16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 2 * **Flammability** : 1 **Physical hazards** : 0
(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 2 **Flammability** : 1 **Instability** : 0

Date of previous issue : **No previous validation.**

Organization that prepared the MSDS : EHS

◤ **Indicates information that has changed from previously issued version.**

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

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MATERIAL SAFETY DATA SHEET

COATINGS AND RESINS GROUP

PPG Industries, Inc.

SECTION 1 - CHEMICAL, PRODUCT, AND COMPANY INFORMATION

PRODUCT CODE/IDENTITY: 6-603

REVISION DATE: 04/13/00 (000) 0814

CUSTOMER PART #/NAME: Not applicable

PRODUCT TRADE NAME: SPEEDHIDE ALKALI RESISTANT PRIMER

CHEMICAL FAMILY: Acrylic

EMERGENCY MEDICAL/SPILL INFO: (304) 843-1300 (U.S.) 91-800-00-214 (MEXICO)

TECHNICAL INFORMATION: 1-800-441-9695

PRODUCT SAFETY/MSDS INFORMATION: 4325 ROSANNA DRIVE, P.O. BOX 9 ALLISON PARK, PA 15101 (412) 492-5555

DATE OF MSDS PREPARATION: 07/31/00

PRIMARY HAZARD WARNING

Harmful if swallowed. May cause slight skin irritation. Causes eye irritation. Vapor and/or spray mist may be harmful if inhaled.

THIS MATERIAL SAFETY DATA SHEET HAS BEEN PREPARED IN ACCORDANCE WITH THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200), THE SUPPLIER NOTIFICATION REQUIREMENTS OF SARA TITLE III, SECTION 313, AND OTHER APPLICABLE RIGHT-TO-KNOW REGULATIONS.

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

REF	HAZARDOUS INGREDIENTS	PERCENT	CAS NUMBER	CARCINOGEN*
01	ETHYLENE GLYCOL	1 - <5	107-21-1	
02	MICA	1 - <5	12001-26-2	
03	ZINC OXIDE	1 - <5	1314-13-2	
04	TITANIUM DIOXIDE	10- <20	13463-67-7	
05	QUARTZ	0.1- <1	14808-60-7	I N O

* Carcinogens: O=OSHA; A=ACGIH; N=NTP; I=IARC

SARA TITLE III & CERCLA CLASSIFICATIONS

REF	SARA 102 RQ (LBS)	SARA 302 TPQ (LBS)	SARA 313	SARA 311/312 AC	CH	FL	PR	RE
01	5000	NOT ESTAB	Y	Y	Y	N	N	N
02	NOT ESTAB	NOT ESTAB	N	N	N	N	N	N
03	NOT ESTAB	NOT ESTAB	Y	N	N	N	N	N
04	NOT ESTAB	NOT ESTAB	N	N	N	N	N	N

05	NOT ESTAB	NOT ESTAB	N	N	Y	N	N	N

SARA 311/312 CATEGORIES FOR THIS PRODUCT: ACUTE= Y, CHRONIC= Y, FLAMMABILITY= N, PRESSURE= N, REACTIVITY= N

OCCUPATIONAL EXPOSURE LIMITS HAVE BEEN ESTABLISHED FOR THE FOLLOWING MATERIALS:

	ACGIH		U.S. OSHA	
REF	TLV-TWA	TLV-STEL	PEL-TWA	PEL-STEL
01	C- 100 mg/m3	NOT ESTAB.	C- 50 ppm	NOT ESTAB.
02	R- 3 mg/m3	NOT ESTAB.	R- 3 mg/m3	NOT ESTAB.
03	10 mg/m3	10 mg/m3	R- 5 mg/m3	10 mg/m3
04	10 mg/m3	NOT ESTAB.	10 mg/m3	NOT ESTAB.
05	R- 0.1 mg/m3	NOT ESTAB.	R- 0.1 mg/m3	NOT ESTAB.

[C- Ceiling Limit; S- Potential Skin Absorption; R- Respirable Dust] [NOT ESTAB. = NOT ESTABLISHED = NOT APPLICABLE]

PRODUCT STATUS RELATIVE TO THE U.S. EPA TOXIC SUBSTANCES CONTROL ACT

All chemical substances in this product are listed on the U.S. TSCA Inventory or are otherwise exempt from TSCA Inventory reporting requirements.

SECTION 3 - HAZARDS IDENTIFICATION

EFFECTS OF OVEREXPOSURE FROM:

INGESTION: Harmful if swallowed.

EYE CONTACT: Causes eye irritation.

SKIN CONTACT: May cause slight skin irritation.

INHALATION: Vapor and/or spray mist may be harmful if inhaled.

CHRONIC OVEREXPOSURE: Avoid long-term and repeated contact. This product contains crystalline silica which has been classified as a human carcinogen by IARC. Long-term exposures may also lead to a disabling lung condition known as silicosis. The risk depends on the duration and level of exposure to dust from sanding surfaces or mist from spray applications. Use of appropriate personal protective equipment and/or engineering controls should be employed whenever these types of operations are being performed. Ingestion of products containing ethylene glycol may damage kidneys and liver and has been shown to cause birth defects in laboratory animals. No evidence of these effects has been found in humans. This product contains titanium dioxide. Animals inhaling massive quantities of titanium dioxide dust in a long-term study developed lung tumors. Studies with humans involved in manufacture of this pigment indicate no increased risk of cancer from exposure. Potential for inhalation of titanium dioxide dusts from coatings is very limited. Since overexposures are not expected, there is no significant hazard for man.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

WARNING: This product contains a chemical known to the State of California to cause cancer.

SECTION 4 - FIRST AID MEASURES

INGESTION: If swallowed, do not induce vomiting. Gently wipe out inside mouth to remove any residual material.

EYE CONTACT: In case of eye contact, remove contact lenses and flush eyes immediately with a gentle stream of luke warm water for at least 15 minutes.

SKIN CONTACT: In case of skin contact, flush immediately with plenty of water for at least 15 minutes followed by washing with soap and water.

INHALATION: If affected by inhalation of vapor or spray mist, remove to fresh air. Apply artificial respiration and other support measures as required.

OTHER: If ingestion, any type of overexposure or symptoms of overexposure occur during or following the use of this product, contact a poison control center, emergency room or physician immediately; have Material Safety Data Sheet information available.

SECTION 5 - FIRE FIGHTING MEASURES

FLASHPOINT: Not applicable

FLAMMABLE LIMITS: Lower explosion limit (LEL): Not available

Upper explosion limit (UEL): Not available

EXTINGUISHING MEDIA: Use extinguishers appropriate for surrounding fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat.

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable. Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

WASTE DISPOSAL METHOD: Waste material must be disposed of in accordance with

federal, state, provincial, and local environmental control regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

SECTION 7 - HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS: Do not store above 120 degrees F. (48 degrees C.).

OTHER PRECAUTIONS: Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT FOR:

EYE PROTECTION: Wear safety glasses.

SKIN PROTECTION: Wear protective clothing. Gloves should be constructed of: impermeable material. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment.

RESPIRATORY PROTECTION: Where ventilation is inadequate, use a NIOSH- approved air purifying respirator with the appropriate chemical cartridges or positive-pressure, air-supplied respirator. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used.

OTHER EQUIPMENT: Clean contaminated clothing and shoes.

VENTILATION REQUIREMENTS: Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

[FORMULA VALUES, NOT SALES SPECIFICATIONS]

BOILING RANGE: 212- 471Degrees F

SOLUBILITY IN WATER: 65.4 %

VAPOR PRESSURE: 17.3 mmHg

WEIGHT/GALLON (LBS): 10.04 (U.S.)

VAPOR DENSITY: Heavier than air

pH: Not applicable

% VOLATILE/VOLUME: 63.620

% SOLIDS BY WEIGHT: 47.06

SPECIFIC GRAVITY: 1.205

EVAPORATION RATE(BuOAc=100): 33

ODOR/APPEARANCE: Viscous liquid with an odor characteristic of the solvents listed in Section 2.

SECTION 10 - STABILITY AND REACTIVITY

This product is normally stable and will not undergo hazardous reactions.

INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID): Avoid contact with strong alkalies, strong mineral acids, or strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: May produce the following hazardous decomposition products when exposed to extreme heat: oxides of aluminum ; oxides of zinc ; carbon monoxide ; carbon dioxide ; lower molecular weight polymer fractions; Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

Hazardous Materials Identification System (HMIS) and National Fire Protection Association (NFPA) Ratings:

HMIS Rating		NFPA Rating	
HEALTH	1*	HEALTH	1
FLAMMABILITY	1	FLAMMABILITY	1
REACTIVITY	0	INSTABILITY	0

Rating System:0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe, *=Chronic Effects.

Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments and conditions of use.

THIS IS THE END OF THE MSDS FOR: 6-603 (00171777.0016-603)

Manufactured and Supplied by:

ARCHITECTUAL FINISHES, INC.

ONE PPG PLACE

PITTSBURGH, PA 15272

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Material Safety Data Sheet

Date of issue 11 May 2014
Version 18

1 . Product and company identification

Product name : EXTERIOR FLAT SPEEDHIDE WHITE

Code : 6-610XI

Supplier : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)

Technical Phone Number : 1-800-441-9695 (8:00 am to 5:00 pm EST)

2 . Hazards identification

Emergency overview : WARNING!

MAY CAUSE ALLERGIC SKIN REACTION. MAY BE HARMFUL IF INHALED OR SWALLOWED. SANDING AND GRINDING DUSTS MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT AND EYE IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER.

Do not get on skin or clothing. Avoid breathing vapor or mist. Avoid contact with eyes. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled. Slightly irritating to the respiratory system.

Ingestion : May be harmful if swallowed.

Skin : May cause an allergic skin reaction.

Eyes : Moderately irritating to eyes.

Over-exposure signs/symptoms

The inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract. Ingestion may cause nausea, weakness and central nervous system effects. If splashed in the eyes, the liquid may cause irritation and reversible damage. Acrylate components of the mixture have irritating properties. Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms, such as redness, blistering, dermatitis etc. May cause allergic skin reactions with repeated exposure. This product contains crystalline silica which can cause lung cancer or silicosis. The risk of cancer depends on the duration and level of exposure to dust from sanding surfaces or mist from spray applications.

Medical conditions aggravated by over-exposure : Pre-existing skin disorders and disorders involving any other target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See toxicological information (Section 11)

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3 . Composition/information on ingredients

Name	CAS number	%
titanium dioxide	13463-67-7	7 - 13
Kaolin	1332-58-7	3 - 7
crystalline silica respirable (<10 microns)	14808-60-7	3 - 7
crystalline silica respirable (>10 microns)	14808-60-7	3 - 7
Diatomaceous earth	61790-53-2	1 - 5
zinc oxide	1314-13-2	0.5 - 1.5
ethanediol	107-21-1	0.1 - 1
octhilinone (ISO)	26530-20-1	0.1 - 1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.

In case of accidental eye contact, avoid concurrent exposure to the sun or other sources of UV light which may increase the sensitivity of the eyes.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

In case of accidental skin contact, avoid concurrent exposure to the sun or other sources of UV light which may increase the sensitivity of skin.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous combustion products : Decomposition products may include the following materials:
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

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6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not swallow. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store below the following temperature: 32F / 0C.

8 . Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
titanium dioxide	TWA STEL	10 mg/m³ Not established	15 mg/m³ TD Not established	10 mg/m³ TD Not established	10 mg/m³ (as Ti) 20 mg/m³ (as Ti)	Not established Not established
Kaolin	TWA STEL	2 mg/m³ R Not established	15 mg/m³ TD 5 mg/m³ R Not established	2 mg/m³ R Not established	10 mg/m³ 20 mg/m³	Not established Not established
crystalline silica respirable (<10 microns)	TWA	0.025 mg/m³ R	10 MG/M3 / (%SiO2+2) R Z 250 MPPCF / (%SiO2+5)	0.1 mg/m³ R	0.1 mg/m³ R	Not established

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8 . Exposure controls/personal protection

			R Z			
crystalline silica respirable (>10 microns)	TWA	0.025 mg/m³ R	10 MG/M3 / (%SiO2+2) R Z 250 MPPCF / (%SiO2+5) R Z	0.1 mg/m³ R	0.1 mg/m³ R	Not established
Diatomaceous earth	TWA	Not established	20 mppcf Z 80 MG/M3 / (%SiO2) Z	3 mg/m³ R 10 mg/m³ 3 mg/m³	10 mg/m³	Not established
zinc oxide	TWA STEL	2 mg/m³ R 10 mg/m³ R	5 mg/m³ F 5 mg/m³ R 15 mg/m³ TD Not established	2 mg/m³ R 10 mg/m³ R	10 mg/m³ 5 mg/m³ 10 mg/m³	Not established Not established
ethanediol	STEL	100 mg/m³ C	Not established	100 mg/m³ C	100 mg/m³ C	Not established

Key to abbreviations

A	=	Acceptable Maximum Peak	S	=	Potential skin absorption
ACGIH	=	American Conference of Governmental Industrial Hygienists.	SR	=	Respiratory sensitization
C	=	Ceiling Limit	SS	=	Skin sensitization
F	=	Fume	STEL	=	Short term Exposure limit values
IPEL	=	Internal Permissible Exposure Limit	TD	=	Total dust
OSHA	=	Occupational Safety and Health Administration.	TLV	=	Threshold Limit Value
R	=	Respirable	TWA	=	Time Weighted Average
Z	=	OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances			

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes : Safety glasses with side shields.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Gloves : butyl rubber, polyethylene

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8 . Exposure controls/personal protection

Respiratory : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state : Liquid.

Flash point : Closed cup: >93.33°C (>200°F)

Color : Not available.

Odor : Not available.

pH : Not available.

Boiling/condensation point : >37.78°C (>100°F)

Melting/freezing point : Not available.

Specific gravity : 1.36

Density (lbs / gal) : 11.35

Vapor pressure : 2.3 kPa (17.4 mm Hg) [room temperature]

Vapor density : Not available.

Volatility : 61% (v/v), 44.54% (w/w)

Evaporation rate : 0.35 (butyl acetate = 1)

Partition coefficient: n-octanol/water : Not available.

% Solid. (w/w) : 55.46

10 . Stability and reactivity

Stability : This mixture contains materials which are unstable under the following conditions: strong UV sources free radical initiators peroxides strong alkalis strong acids reactive metals These could cause the product to polymerize exothermically. Unintentional contact with them should be avoided. Stable under recommended storage and handling conditions (see Section 7).

Conditions to avoid : No specific data.

Materials to avoid : Reactive or incompatible with the following materials:,acids,oxidizing materials,strong alkalis

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

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11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
titanium dioxide	LD50 Oral	Rat	>10 g/kg	-
Kaolin	LD50 Oral	Rat	>5000 mg/kg	-
ethanediol	LD50 Oral	Rat	4700 mg/kg	-
	LD50 Dermal	Rabbit	9.53 g/kg	-
octhilinone (ISO)	LD50 Oral	Rat	0.55 g/kg	-
	LD50 Dermal	Rabbit	0.69 g/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Target organs : Contains material which causes damage to the following organs: liver, spleen, eyes, bone marrow.
Contains material which may cause damage to the following organs: kidneys, lungs, upper respiratory tract, stomach.

Carcinogenicity

Carcinogenicity : Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	ACGIH	IARC	NTP	OSHA
titanium dioxide	A4	2B	-	-
Kaolin	A4	-	-	-
crystalline silica respirable (<10 microns)	A2	1	Known to be a human carcinogen.	-
crystalline silica respirable (>10 microns)	A2	1	Known to be a human carcinogen.	-
Diatomaceous earth	-	3	-	-
ethanediol	A4	-	-	-

Carcinogen Classification code:
ACGIH: A1, A2, A3, A4, A5
IARC: 1, 2A, 2B, 3, 4
NTP: Proven, Possible
OSHA: +
Not listed or regulated as a carcinogen: -

Teratogenicity : Contains material which may cause birth defects, based on animal data.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

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13 . Disposal considerations

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14. Transport information

	DOT	TDG	Mexico	IMDG
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.	Not applicable.

Additional information

DOT : None identified.
TDG : None identified.
Mexico : None identified.
IMDG : None identified.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

15 . Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.
Australia inventory (AICS) : All components are listed or exempted.
Canada inventory (DSL) : All components are listed or exempted.
China inventory (IECSC) : All components are listed or exempted.
Europe inventory (REACH) : Please contact your supplier for information on the inventory status of this material.
Japan inventory (ENCS) : At least one component is not listed.
Korea inventory (KECI) : All components are listed or exempted.
New Zealand (NZIoC) : Not determined.
Philippines inventory (PICCS) : All components are listed or exempted.

United States

SARA 302/304: No products were found.
CERCLA: Hazardous substances.: zinc oxide: No RQ is being assigned to the generic or broad class.; ethanediol: 5000 lbs. (2270 kg);

SARA 311/312 SDS Distribution - Chemical Inventory - Hazard Identification:

Chemical name	CAS #	Acute	Chronic	Fire	Reactive	Pressure

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15 . Regulatory information

titanium dioxide	13463-67-7	N	Y	N	N	N
Kaolin	1332-58-7	Y	N	N	N	N
crystalline silica respirable (<10 microns)	14808-60-7	N	Y	N	N	N
crystalline silica respirable (>10 microns)	14808-60-7	N	Y	N	N	N
Diatomaceous earth	61790-53-2	N	N	N	N	N
zinc oxide	1314-13-2	N	N	N	N	N
ethanediol	107-21-1	Y	Y	N	N	N
octhilinone (ISO)	26530-20-1	Y	N	N	N	N
	Product as-supplied :	Y	Y	N	N	N

SARA 313	Chemical name	CAS number	Concentration
Supplier notification	zinc oxide	1314-13-2	0.5 - 1.5

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Canada

WHMIS (Canada) : Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

Mexico

Classification

Flammability : 1 **Health** : 2 **Reactivity** : 0

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 2 * **Flammability** : 1 **Physical hazards** : 0

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 2 **Flammability** : 1 **Instability** : 0

Date of previous issue : **4/3/2014.**

Organization that prepared the MSDS : EHS

Indicates information that has changed from previously issued version.

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

Powered by IHS

Material Safety Data Sheet

Date of issue 11 May 2014
Version 18

1 . Product and company identification

Product name : SPEEDHIDE EXTERIOR FLAT PASTEL
Code : 6-650XI
Supplier : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272
Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)
Technical Phone Number : 1-800-441-9695 (8:00 am to 5:00 pm EST)

2 . Hazards identification

Emergency overview : WARNING!

MAY CAUSE ALLERGIC SKIN REACTION. MAY BE HARMFUL IF INHALED OR SWALLOWED. SANDING AND GRINDING DUSTS MAY BE HARMFUL IF INHALED. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER.

Do not get on skin or clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled.
Ingestion : May be harmful if swallowed.
Skin : May cause an allergic skin reaction.
Eyes : No known significant effects or critical hazards.

Over-exposure signs/symptoms

The inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract. Ingestion may cause nausea, weakness and central nervous system effects. If splashed in the eyes, the liquid may cause irritation and reversible damage. Acrylate components of the mixture have irritating properties. Prolonged or repeated contact with skin or mucous membrane may result in irritation symptoms, such as redness, blistering, dermatitis etc. May cause allergic skin reactions with repeated exposure. This product contains crystalline silica which can cause lung cancer or silicosis. The risk of cancer depends on the duration and level of exposure to dust from sanding surfaces or mist from spray applications.

Medical conditions aggravated by over-exposure : Pre-existing skin disorders and disorders involving any other target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See toxicological information (Section 11)

3 . Composition/information on ingredients

Name	CAS number	%

Powered by IHS

3 . Composition/information on ingredients

titanium dioxide	13463-67-7	10 - 30
crystalline silica respirable (<10 microns)	14808-60-7	3 - 7
Diatomaceous earth	61790-53-2	1 - 5
crystalline silica respirable (>10 microns)	14808-60-7	1 - 5
zinc oxide	1314-13-2	0.5 - 1.5
ethanediol	107-21-1	0.1 - 1
octhilinone (ISO)	26530-20-1	0.1 - 1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.

In case of accidental eye contact, avoid concurrent exposure to the sun or other sources of UV light which may increase the sensitivity of the eyes.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

In case of accidental skin contact, avoid concurrent exposure to the sun or other sources of UV light which may increase the sensitivity of skin.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous combustion products : Decomposition products may include the following materials:
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Powered by IHS

6 . Accidental release measures

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling : Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite. To avoid the risks of fires, all contaminated materials should be placed in a metal container filled with water and sealed. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside. Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not swallow. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store below the following temperature: 32F / 0C.

8 . Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
titanium dioxide	TWA STEL	10 mg/m³ Not established	15 mg/m³ TD Not established	10 mg/m³ TD Not established	10 mg/m³ (as Ti) 20 mg/m³ (as Ti)	Not established Not established
crystalline silica respirable (<10 microns)	TWA	0.025 mg/m³ R	10 MG/M3 / (%SiO2+2) R Z 250 MPPCF / (%SiO2+5) R Z	0.1 mg/m³ R	0.1 mg/m³ R	Not established
Diatomaceous earth	TWA	Not established	20 mppcf Z 80 MG/M3 / (%SiO2) Z	3 mg/m³ R 10 mg/m³ 3 mg/m³	10 mg/m³	Not established

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8 . Exposure controls/personal protection

crystalline silica respirable (>10 microns)	TWA	0.025 mg/m³ R	10 MG/M3 / (%SiO2+2) R Z 250 MPPCF / (%SiO2+5) R Z	0.1 mg/m³ R	0.1 mg/m³ R	Not established
zinc oxide	TWA	2 mg/m³ R	5 mg/m³ F 5 mg/m³ R 15 mg/m³ TD	2 mg/m³ R	10 mg/m³ 5 mg/m³	Not established
	STEL	10 mg/m³ R	Not established	10 mg/m³ R	10 mg/m³	Not established
ethanediol	STEL	100 mg/m³ C	Not established	100 mg/m³ C	100 mg/m³ C	Not established

Key to abbreviations

A	=	Acceptable Maximum Peak	S	=	Potential skin absorption
ACGIH	=	American Conference of Governmental Industrial Hygienists.	SR	=	Respiratory sensitization
C	=	Ceiling Limit	SS	=	Skin sensitization
F	=	Fume	STEL	=	Short term Exposure limit values
IPEL	=	Internal Permissible Exposure Limit	TD	=	Total dust
OSHA	=	Occupational Safety and Health Administration.	TLV	=	Threshold Limit Value
R	=	Respirable	TWA	=	Time Weighted Average
Z	=	OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances			

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Engineering measures : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes : Safety glasses with side shields.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Gloves : butyl rubber, polyethylene

Respiratory : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

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8 . Exposure controls/personal protection

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state : Liquid.
Flash point : Closed cup: >93.33°C (>200°F)
Color : Not available.
Odor : Not available.
pH : Not available.
Boiling/condensation point : >37.78°C (>100°F)
Melting/freezing point : Not available.
Specific gravity : 1.28
Density (lbs / gal) : 10.68
Vapor pressure : 2.3 kPa (17.4 mm Hg) [room temperature]
Vapor density : Not available.
Volatility : 66% (v/v), 51.37% (w/w)
Evaporation rate : 0.35 (butyl acetate = 1)
Partition coefficient: n-octanol/water : Not available.
% Solid. (w/w) : 48.63

10 . Stability and reactivity

Stability : This mixture contains materials which are unstable under the following conditions: strong UV sources free radical initiators peroxides strong alkalis strong acids reactive metals These could cause the product to polymerize exothermically. Unintentional contact with them should be avoided. Stable under recommended storage and handling conditions (see Section 7).
Conditions to avoid : No specific data.
Materials to avoid : Reactive or incompatible with the following materials:,acids,oxidizing materials,strong alkalis
Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
titanium dioxide	LD50 Oral	Rat	>10 g/kg	-
ethanediol	LD50 Oral	Rat	4700 mg/kg	-
	LD50 Dermal	Rabbit	9.53 g/kg	-
octhilinone (ISO)	LD50 Oral	Rat	0.55 g/kg	-
	LD50 Dermal	Rabbit	0.69 g/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

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11 . Toxicological information

Conclusion/Summary : Not available.

Target organs : Contains material which causes damage to the following organs: liver, spleen, bone marrow.
Contains material which may cause damage to the following organs: kidneys, lungs, upper respiratory tract, eyes.

Carcinogenicity

Carcinogenicity : Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	ACGIH	IARC	NTP	OSHA
titanium dioxide	A4	2B	-	-
crystalline silica respirable (<10 microns)	A2	1	Known to be a human carcinogen.	-
Diatomaceous earth	-	3	-	-
crystalline silica respirable (>10 microns)	A2	1	Known to be a human carcinogen.	-
ethanediol	A4	-	-	-

Carcinogen Classification code:
ACGIH: A1, A2, A3, A4, A5
IARC: 1, 2A, 2B, 3, 4
NTP: Proven, Possible
OSHA: +
Not listed or regulated as a carcinogen: -

Teratogenicity : Contains material which may cause birth defects, based on animal data.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14. Transport information

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14. Transport information

	DOT	TDG	Mexico	IMDG
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.	Not applicable.

Additional information

DOT : None identified.
TDG : None identified.
Mexico : None identified.
IMDG : None identified.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

15 . Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.
Australia inventory (AICS) : At least one component is not listed.
Canada inventory (DSL) : All components are listed or exempted.
China inventory (IECSC) : All components are listed or exempted.
Europe inventory (REACH) : Please contact your supplier for information on the inventory status of this material.
Japan inventory (ENCS) : Not determined.
Korea inventory (KECI) : All components are listed or exempted.
New Zealand (NZIoC) : Not determined.
Philippines inventory (PICCS) : Not determined.

United States

SARA 302/304: No products were found.
CERCLA: Hazardous substances.: zinc oxide: No RQ is being assigned to the generic or broad class.; ethanediol: 5000 lbs. (2270 kg);

SARA 311/312 SDS Distribution - Chemical Inventory - Hazard Identification:

Chemical name	CAS #	Acute	Chronic	Fire	Reactive	Pressure
titanium dioxide	**13463-67-7**	N	Y	N	N	N
crystalline silica respirable (<10 microns)	**14808-60-7**	N	Y	N	N	N
Diatomaceous earth	**61790-53-2**	N	N	N	N	N
crystalline silica respirable (>10 microns)	**14808-60-7**	N	Y	N	N	N
zinc oxide	**1314-13-2**	N	N	N	N	N
ethanediol	**107-21-1**	Y	Y	N	N	N
octhilinone (ISO)	**26530-20-1**	Y	N	N	N	N

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15 . Regulatory information

Product as-supplied :	Y	Y	N	N	N

SARA 313	Chemical name	CAS number	Concentration
Supplier notification	zinc oxide	1314-13-2	0.5 - 1.5

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Canada

WHMIS (Canada) : Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

Mexico

Classification

Flammability : 1 **Health** : 2 **Reactivity** : 0

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 2 * **Flammability** : 1 **Physical hazards** : 0

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 2 **Flammability** : 1 **Instability** : 0

Date of previous issue : **4/17/2014.**

Organization that prepared the MSDS : EHS

Indicates information that has changed from previously issued version.

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

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Material Safety Data Sheet

Date of issue 11 March 2014
Version 18

1 . Product and company identification

Product name : INT/EXT FLAT BLACK HP
Code : 6-753
Supplier : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272
Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)
Technical Phone Number : 1-800-441-9695 (8:00 am to 5:00 pm EST)

2 . Hazards identification

Emergency overview : WARNING!

MAY BE HARMFUL IF INHALED OR SWALLOWED. SANDING AND GRINDING DUSTS MAY BE HARMFUL IF INHALED. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER.

Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled.
Ingestion : May be harmful if swallowed.
Skin : No known significant effects or critical hazards.
Eyes : No known significant effects or critical hazards.

Over-exposure signs/symptoms

This product contains crystalline silica which can cause lung cancer or silicosis. The risk of cancer depends on the duration and level of exposure to dust from sanding surfaces or mist from spray applications.

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See toxicological information (Section 11)

3 . Composition/information on ingredients

Name	CAS number	%
crystalline silica respirable (<10 microns)	14808-60-7	7 - 13
crystalline silica respirable (>10 microns)	14808-60-7	5 - 10
cristobalite (<10 microns)	14464-46-1	1 - 5
Kieselguhr, soda ash flux-calcined	68855-54-9	1 - 5
carbon black respirable	1333-86-4	0.5 - 1.5

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous combustion products : Decomposition products may include the following materials:
carbon oxides
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

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7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Do not swallow. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store below the following temperature: 32F / 0C.

8 . Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
crystalline silica respirable (<10 microns)	TWA	0.025 mg/m³ R	10 MG/M3 / (%SiO2+2) R Z 250 MPPCF / (%SiO2+5) R Z	0.1 mg/m³ R	0.1 mg/m³ R	Not established
crystalline silica respirable (>10 microns)	TWA	0.025 mg/m³ R	10 MG/M3 / (%SiO2+2) R Z 250 MPPCF / (%SiO2+5) R Z	0.1 mg/m³ R	0.1 mg/m³ R	Not established
cristobalite (<10 microns)	TWA	0.025 mg/m³ R	250 MPPCF / 2 x (%SiO2+5) R Z 10 MG/M3 / 2 x (%SiO2+2) R Z 30 MG/M3 / 2 x (%SiO2+2) TD Z	0.05 mg/m³ R	0.05 mg/m³	Not established
Kieselguhr, soda ash flux-calcined	TWA	Not established	Not established	Not established	10 mg/m³ 3 mg/m³ R	Not established
carbon black respirable	TWA STEL	3 mg/m³ Not established	3.5 mg/m³ Not established	3 mg/m³ Not established	3.5 mg/m³ 7 mg/m³	Not established Not established

Key to abbreviations

A = Acceptable Maximum Peak S = Potential skin absorption

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8 . Exposure controls/personal protection

ACGIH	=	American Conference of Governmental Industrial Hygienists.	SR	=	Respiratory sensitization
C	=	Ceiling Limit	SS	=	Skin sensitization
F	=	Fume	STEL	=	Short term Exposure limit values
IPEL	=	Internal Permissible Exposure Limit	TD	=	Total dust
OSHA	=	Occupational Safety and Health Administration.	TLV	=	Threshold Limit Value
R	=	Respirable	TWA	=	Time Weighted Average
Z	=	OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances			

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Engineering measures : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes : Safety glasses with side shields.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Respiratory : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state : Liquid.

Flash point : Closed cup: >93.33°C (>200°F)

Color : Not available.

Odor : Not available.

pH : Not available.

Boiling/condensation point : 37.22°C (99°F)

Melting/freezing point : Not available.

Specific gravity : 1.23

Density (lbs / gal) : 10.26

Vapor pressure : 2.3 kPa (17.5 mm Hg) [room temperature]

Vapor density : Not available.

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9 . Physical and chemical properties

Volatility : 66% (v/v), 53.64% (w/w)
Evaporation rate : 0.35 (butyl acetate = 1)
Partition coefficient: n-octanol/water : Not available.
% Solid. (w/w) : 46.36

10 . Stability and reactivity

Stability : Stable under recommended storage and handling conditions (see Section 7).
Conditions to avoid : No specific data.
Materials to avoid : Reactive or incompatible with the following materials:,acids,oxidizing materials,strong alkalis
Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
carbon black respirable	LD50 Oral LD50 Dermal	Rat Rabbit	>15400 mg/kg >3 g/kg	- -

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Target organs : Contains material which causes damage to the following organs: liver, spleen, bone marrow.
Contains material which may cause damage to the following organs: kidneys, lungs, upper respiratory tract, eyes.

Carcinogenicity

Carcinogenicity : Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	ACGIH	IARC	NTP	OSHA
crystalline silica respirable (<10 microns)	A2	1	Known to be a human carcinogen.	-
crystalline silica respirable (>10 microns)	A2	1	Known to be a human carcinogen.	-
cristobalite (<10 microns)	A2	1	Known to be a human carcinogen.	-
Kieselguhr, soda ash flux-calcined	-	3	-	-
carbon black respirable	A3	-	-	-

Carcinogen Classification code:
ACGIH: A1, A2, A3, A4, A5
IARC: 1, 2A, 2B, 3, 4
NTP: Proven, Possible
OSHA: +
Not listed or regulated as a carcinogen: -

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12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14. Transport information

	DOT	TDG	Mexico	IMDG
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.	Not applicable.

Additional information

DOT : None identified.
TDG : None identified.
Mexico : None identified.
IMDG : None identified.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Powered by IHS

15 . Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.
Australia inventory (AICS) : All components are listed or exempted.
Canada inventory (DSL) : All components are listed or exempted.
China inventory (IECSC) : All components are listed or exempted.
Europe inventory (REACH) : Please contact your supplier for information on the inventory status of this material.
Japan inventory (ENCS) : At least one component is not listed.
Korea inventory (KECI) : At least one component is not listed.
New Zealand (NZIoC) : Substance Use Restricted
Philippines inventory (PICCS) : At least one component is not listed.

United States

U.S. Federal regulations :
SARA 302/304: No products were found.
CERCLA: Hazardous substances.: No products were found.

SARA 311/312 SDS Distribution - Chemical Inventory - Hazard Identification:

Chemical name	CAS #	Acute	Chronic	Fire	Reactive	Pressure
crystalline silica respirable (<10 microns)	14808-60-7	N	Y	N	N	N
crystalline silica respirable (>10 microns)	14808-60-7	N	Y	N	N	N
cristobalite (<10 microns)	14464-46-1	N	Y	N	N	N
Kieselguhr, soda ash flux-calcined	68855-54-9	N	N	N	N	N
carbon black respirable	1333-86-4	N	Y	N	N	N
	Product as-supplied :	N	Y	N	N	N

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Canada

WHMIS (Canada) : Class D-2A: Material causing other toxic effects (Very toxic).

Mexico

Classification

Flammability : 1 **Health** : 1 **Reactivity** : 0

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 1 * **Flammability** : 1 **Physical hazards** : 0
(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 1 **Flammability** : 1 **Instability** : 0

Date of previous issue : **8/4/2013.**

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16 . Other information

Organization that prepared the MSDS : EHS

◤ **Indicates information that has changed from previously issued version.**

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

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MATERIAL SAFETY DATA SHEET

COATINGS AND RESINS GROUP

PPG Industries, Inc.

SECTION 1 - CHEMICAL, PRODUCT, AND COMPANY INFORMATION

PRODUCT CODE/IDENTITY: 6-901

REVISION DATE: 03/15/00 (000) 0822

CUSTOMER PART #/NAME: Not applicable

PRODUCT TRADE NAME: S/G LATEX HOUSE PAINT

CHEMICAL FAMILY: Acrylic

EMERGENCY MEDICAL/SPILL INFO: (304) 843-1300 (U.S.) 91-800-00-214 (MEXICO)

TECHNICAL INFORMATION: 1-800-441-9695

PRODUCT SAFETY/MSDS INFORMATION: 4325 ROSANNA DRIVE, P.O. BOX 9 ALLISON PARK, PA 15101 (412) 492-5555

DATE OF MSDS PREPARATION: 07/13/00

PRIMARY HAZARD WARNING

Harmful if swallowed. May cause slight skin irritation. Causes eye irritation. Prolonged or repeated contact may cause an allergic skin reaction. Vapor and/or spray mist may be harmful if inhaled.

THIS MATERIAL SAFETY DATA SHEET HAS BEEN PREPARED IN ACCORDANCE WITH THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200), THE SUPPLIER NOTIFICATION REQUIREMENTS OF SARA TITLE III, SECTION 313, AND OTHER APPLICABLE RIGHT-TO-KNOW REGULATIONS.

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

REF	HAZARDOUS INGREDIENTS	PERCENT	CAS NUMBER	CARCINOGEN*
01	TITANIUM DIOXIDE	10- <20	13463-67-7	
02	OCTYLISOTHIAZOLONE	0.1- <1	26530-20-1	
03	SILICA	1 - <5	7631-86-9	

* Carcinogens: O=OSHA; A=ACGIH; N=NTP; I=IARC

SARA TITLE III & CERCLA CLASSIFICATIONS

REF	SARA 102 RQ (LBS)	SARA 302 TPQ (LBS)	SARA 313	SARA 311/312 AC	CH	FL	PR	RE
01	NOT ESTAB	NOT ESTAB	N	N	N	N	N	N
02	NOT ESTAB	NOT ESTAB	N	Y	N	N	N	N
03	NOT ESTAB	NOT ESTAB	N	N	N	N	N	N

SARA 311/312 CATEGORIES FOR THIS PRODUCT: ACUTE= Y, CHRONIC= N, FLAMMABILITY= N,

PRESSURE= N, REACTIVITY= N

OCCUPATIONAL EXPOSURE LIMITS HAVE BEEN ESTABLISHED FOR THE FOLLOWING MATERIALS:

	ACGIH		U.S. OSHA	
REF	TLV-TWA	TLV-STEL	PEL-TWA	PEL-STEL
01	10 mg/m3	NOT ESTAB.	10 mg/m3	NOT ESTAB.
02	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.	NOT ESTAB.
03	10 mg/m3	NOT ESTAB.	6 mg/m3	NOT ESTAB.

[C- Ceiling Limit; S- Potential Skin Absorption; R- Respirable Dust] [NOT ESTAB. = NOT ESTABLISHED = NOT APPLICABLE]

PRODUCT STATUS RELATIVE TO THE U.S. EPA TOXIC SUBSTANCES CONTROL ACT

All chemical substances in this product are listed on the U.S. TSCA Inventory or are otherwise exempt from TSCA Inventory reporting requirements.

SECTION 3 - HAZARDS IDENTIFICATION

EFFECTS OF OVEREXPOSURE FROM:

INGESTION: Harmful if swallowed.

EYE CONTACT: Causes eye irritation.

SKIN CONTACT: May cause slight skin irritation. Prolonged or repeated contact may cause an allergic skin reaction.

INHALATION: Vapor and/or spray mist may be harmful if inhaled.

CHRONIC OVEREXPOSURE: Avoid long-term and repeated contact. This product either contains formaldehyde or is capable of releasing formaldehyde above 0.5 ppm under certain conditions. Formaldehyde is a potential cancer hazard, a skin sensitizer and a respiratory sensitizer. This product contains titanium dioxide. Animals inhaling massive quantities of titanium dioxide dust in a long-term study developed lung tumors. Studies with humans involved in manufacture of this pigment indicate no increased risk of cancer from exposure. Potential for inhalation of titanium dioxide dusts from coatings is very limited. Since overexposures are not expected, there is no significant hazard for man.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

SECTION 4 - FIRST AID MEASURES

INGESTION: If swallowed, do not induce vomiting. Gently wipe out inside mouth to remove any residual material.

EYE CONTACT: In case of eye contact, remove contact lenses and flush eyes immediately with a gentle stream of luke warm water for at least 15 minutes.

SKIN CONTACT: In case of skin contact, flush immediately with plenty of water

for at least 15 minutes followed by washing with soap and water.

INHALATION: If affected by inhalation of vapor or spray mist, remove to fresh air. Apply artificial respiration and other support measures as required.

OTHER: If ingestion, any type of overexposure or symptoms of overexposure occur during or following the use of this product, contact a poison control center, emergency room or physician immediately; have Material Safety Data Sheet information available.

SECTION 5 - FIRE FIGHTING MEASURES

FLASHPOINT: Not applicable

FLAMMABLE LIMITS: Lower explosion limit (LEL): Not available

Upper explosion limit (UEL): Not available

EXTINGUISHING MEDIA: Use extinguishers appropriate for surrounding fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat.

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable. Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

WASTE DISPOSAL METHOD: Waste material must be disposed of in accordance with federal, state, provincial, and local environmental control regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

SECTION 7 - HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS: Do not store above 120 degrees F. (48 degrees C.).

OTHER PRECAUTIONS: Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring.

Avoid free fall of liquids in excess of a few inches.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT FOR:

EYE PROTECTION: Wear safety glasses.

SKIN PROTECTION: Wear protective clothing to prevent skin contact. Apron and gloves should be constructed of: impermeable material. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment.

RESPIRATORY PROTECTION: Where ventilation is inadequate, use a NIOSH- approved air purifying respirator with the appropriate chemical cartridges or positive-pressure, air-supplied respirator. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used.

OTHER EQUIPMENT: Clean contaminated clothing and shoes.

VENTILATION REQUIREMENTS: Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

[FORMULA VALUES, NOT SALES SPECIFICATIONS]

BOILING RANGE: 212- 471Degrees F

SOLUBILITY IN WATER: 62.4 %

VAPOR PRESSURE: 17.3 mmHg

WEIGHT/GALLON (LBS): 9.82 (U.S.)

VAPOR DENSITY: Heavier than air

pH: Not applicable

% VOLATILE/VOLUME: 70.680

% SOLIDS BY WEIGHT: 40.03

SPECIFIC GRAVITY: 1.178

EVAPORATION RATE(BuOAc=100): 33

ODOR/APPEARANCE: Viscous liquid with an odor characteristic of the solvents listed in Section 2.

SECTION 10 - STABILITY AND REACTIVITY

This product is normally stable and will not undergo hazardous reactions.

INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID): Avoid contact with strong alkalies, strong mineral acids, or strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: May produce the following hazardous decomposition products when exposed to extreme heat: oxides of aluminum ; carbon monoxide ; carbon dioxide ; lower molecular weight polymer fractions; Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

Hazardous Materials Identification System (HMIS) and National Fire Protection Association (NFPA) Ratings:

HMIS Rating		NFPA Rating	
HEALTH	1	HEALTH	1
FLAMMABILITY	1	FLAMMABILITY	1
REACTIVITY	0	INSTABILITY	0

Rating System:0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe, *=Chronic Effects.

Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments and conditions of use.

THIS IS THE END OF THE MSDS FOR: 6-901 (00169481.0036-901)

Manufactured and Supplied by:

ARCHITECTUAL FINISHES, INC.

ONE PPG PLACE

PITTSBURGH, PA 15272

7W

Material Safety Data Sheet

Date of issue 11 February 2011
Version 17.01

1 . Product and company identification

Product name : Speedhide Interior Latex Satin White/Pastel
Code : 6-3511
Supplier : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272
Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)
Technical Phone Number : 1-800-441-9695 (8:00 am to 5:00 pm EST)

2 . Hazards identification

Emergency overview : WARNING!

MAY BE HARMFUL IF INHALED OR SWALLOWED. SANDING AND GRINDING DUSTS MAY BE HARMFUL IF INHALED. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER.

Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled.
Ingestion : May be harmful if swallowed.
Skin : No known significant effects or critical hazards.
Eyes : No known significant effects or critical hazards.

Over-exposure signs/symptoms

This product contains crystalline silica which can cause lung cancer or silicosis. The risk of cancer depends on the duration and level of exposure to dust from sanding surfaces or mist from spray applications.

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See toxicological information (Section 11)

3 . Composition/information on ingredients

Name	CAS number	%
Titanium dioxide	13463-67-7	10 - 30
Nepheline syenite	37244-96-5	3 - 7
Silicon dioxide	7631-86-9	1 - 5
aluminium hydroxide	21645-51-2	0.5 - 1.5
cristobalite	14464-46-1	0.1 - 1
Kieselguhr, soda ash flux-calcined	68855-54-9	0.1 - 1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous combustion products : Decomposition products may include the following materials:
carbon oxides
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

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7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Do not swallow. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store below the following temperature: 32F / 0C.

8 . Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
Titanium dioxide	TWA STEL	10 mg/m³ Not established	15 mg/m³ TD Not established	10 mg/m³ TD Not established	10 mg/m³ (as Ti) 20 mg/m³ (as Ti)	Not established Not established
Nepheline syenite	TWA	10 MG/M3 TD 3 MG/M3 R	15 mg/m3 TD 5 mg/m3 R 15 mg/m3	10 mg/m³	Not established	Not established
Silicon dioxide	TWA	Not established	Not established	Not established	10 mg/m³ 3 mg/m³ R	Not established
aluminium hydroxide	TWA	1 mg/m³	Not established	Not established	2 mg/m³	Not established
cristobalite	TWA	0.025 mg/m³ R	10 mg/m³ R Z 30 mg/m³ TD Z 250 mppcf R Z	0.05 mg/m³ R	0.05 mg/m³	Not established
Kieselguhr, soda ash flux-calcined	TWA	Not established	Not established	Not established	10 mg/m³ 3 mg/m³ R	Not established

Key to abbreviations

A = Acceptable Maximum Peak
ACGIH = American Conference of Governmental Industrial Hygienists.
C = Ceiling Limit
F = Fume
IPEL = Internal Permissible Exposure Limit
OSHA = Occupational Safety and Health Administration.
R = Respirable
Z = OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances
S = Potential skin absorption
SR = Respiratory sensitization
SS = Skin sensitization
STEL = Short term Exposure limit values
TD = Total dust
TLV = Threshold Limit Value
TWA = Time Weighted Average

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

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8 . Exposure controls/personal protection

Engineering measures : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes : Safety glasses with side shields.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Respiratory : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state : Liquid.

Flash point : Closed cup: >93.33°C (>200°F)

Color : Not available.

Odor : Not available.

pH : Not available.

Boiling/condensation point : >37.78°C (>100°F)

Melting/freezing point : Not available.

Specific gravity : 1.24

Density (lbs / gal) : 10.35

Vapor pressure : 2.3 kPa (17.5 mm Hg) [20°C]

Vapor density : Not available.

Volatility : 67% (v/v), 54.75% (w/w)

Odor threshold : Not available.

Evaporation rate : 36 (butyl acetate = 1)

Partition coefficient: n-octanol/water : Not available.

% Solid. (w/w) : 45.25

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10 . Stability and reactivity

Stability : Stable under recommended storage and handling conditions (see section 7).

Conditions to avoid : No specific data.

Materials to avoid : Reactive or incompatible with the following materials:,water,acids,oxidizing materials,strong alkalis

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Titanium dioxide	LD50 Oral	Rat	>10 g/kg	-

Chronic toxicity

Conclusion/Summary : Not available.

Target organs : Contains material which causes damage to the following organs: lungs, upper respiratory tract, central nervous system (CNS).
Contains material which may cause damage to the following organs: skin, eyes.

Carcinogenicity

Carcinogenicity : Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Titanium dioxide	A4	2B	-	-	-	-
Silicon dioxide	-	3	-	-	-	-
aluminium hydroxide	A4	-	-	-	-	-
cristobalite	A2	1	-	+	Proven.	-

Mutagenicity

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity

Teratogenicity : No known significant effects or critical hazards.

Reproductive toxicity

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Titanium dioxide	Acute EC50 >1000000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours

Other adverse effects : No known significant effects or critical hazards.

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13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14 . Transport information

Regulation	UN number	Proper shipping name	Classes	PG*	Additional information
UN	None.	Not regulated.	None.	-	-
IMDG	None.	Not regulated.	None.	-	-
DOT	Not regulated.	-		-	-

PG* : Packing group

Reportable quantity RQ : CERCLA: Hazardous substances.: No products were found.

15 . Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.
Australia inventory (AICS) : At least one component is not listed.
Canada inventory (DSL) : All components are listed or exempted.
China inventory (IECSC) : All components are listed or exempted.
Europe inventory (REACH) : Please contact your supplier for information on the inventory status of this material.
Japan inventory (ENCS) : At least one component is not listed.
Korea inventory (KECI) : At least one component is not listed.
New Zealand (NZIoC) : Substance Use Restricted
Philippines inventory (PICCS) : At least one component is not listed.

United States

U.S. Federal regulations :

United States - TSCA 5(a)2 - Proposed significant new use rules:
n-Butyl acrylate Listed

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: aluminium hydroxide; Titanium dioxide
CERCLA: Hazardous substances.: No products were found.

SARA 311/312 MSDS Distribution - Chemical Inventory - Hazard Identification:

Chemical name	CAS #	Acute	Chronic	Fire	Reactive	Pressure
Titanium dioxide	13463-67-7	N	Y	N	N	N
Nepheline syenite	37244-96-5	N	N	N	N	N
Silicon dioxide	7631-86-9	N	N	N	N	N
aluminium hydroxide	21645-51-2	N	N	N	N	N
cristobalite	14464-46-1	N	Y	N	N	N

Powered by ATRION

15 . Regulatory information

Product as-supplied :	N	Y	N	N	N

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Canada

WHMIS (Canada) : Class D-2A: Material causing other toxic effects (Very toxic).

Mexico

Classification

Flammability : 1 **Health** : 1 **Reactivity** : 0

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 1 * **Flammability** : 1 **Physical hazards** : 0

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 1 **Flammability** : 1 **Instability** : 0

Date of previous issue : **8/31/2010.**

Organization that prepared the MSDS : EHS

Indicates information that has changed from previously issued version.

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

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MSDS Safety Information

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FSC: 8010
MSDS Date: 10/29/1992
MSDS Num: CGRLY
LIIN: 00N083889
Product ID: INDUSTRIAL WHITE, 7-282
MFN: 01
Responsible Party
Cage: DO542
Name: PPG INDUSTRIES INC
Address: 4325 ROSANNA DR
Box: 9
City: ALLISON PARK PA 15101
Info Phone Number: 412-492-5555
Emergency Phone Number: 304-843-1300
Published: Y

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Contractor Summary

==========

Cage: PPGXX
Name: PPG INDUSTRIES INC
Address: UNKNOWN
Box: UNKNOW
City: UNKNOWN NK 00000
Phone: UNKNOWN
Cage: DO542
Name: PPG INDUSTRIES INC. COATINGS & RESINS GP
Address: 4325 ROSEANNA DR PO BOX 9
Box: 9
City: ALLISON PARK PA 15101
Phone: 412-492-5555

==========

Ingredients

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Cas: 68953-58-2
RTECS #: UZ2996400
Name: QUARTERNARY AMMONIUM COMPOUNDS, BIS(HYDROGENATED TALLOW ALKYL) DIMETHYL-, SALT WITH BENTONITE; (ORGANIC CLAY)
% Wt: 1-2
OSHA PEL: N/K (FP N)
ACGIH TLV: N/K (FP N)

Cas: 1314-13-2
RTECS #: ZH4810000
Name: ZINC OXIDE (SARA 313) (CERCLA)

% Wt: 1-2
OSHA PEL: 15 MG/M3 TDUST
ACGIH TLV: 10 MG/M3 TDUST

Cas: 13463-67-7
RTECS #: XR2275000
Name: TITANIUM OXIDE; (TITANIUM DIOXIDE)
% Wt: 25-30
OSHA PEL: 15 MG/M3 TDUST
ACGIH TLV: 10 MG/M3 TDUST

Cas: 64742-88-7
RTECS #: WF3450000
Name: SOLVENT NAPHTHA, PETROLEUM, MEDIUM ALIPHATIC; (MEDIUM ALIPHATIC SOLVENT NAPHTHA)
% Wt: 20-25
OSHA PEL: N/K (FP N)
ACGIH TLV: N/K (FP N)

Cas: 1330-20-7
RTECS #: ZE2100000
Name: XYLENE (SARA 313) (CERCLA)
% Wt: 1-2
OSHA PEL: 100 PPM
ACGIH TLV: 100 PPM; 150 STEL
EPA Rpt Qty: 1000 LBS
DOT Rpt Qty: 1000 LBS

Cas: 64741-92-0
Name: NAPHTHA, SOLVENT-REFINED HEAVY; (MINERAL SPIRITS)
% Wt: 5-10
OSHA PEL: 5 MG/M3 (OIL MIST)
ACGIH TLV: 5 MG/M3 (OIL MIST)

Name: FILM FORMERS, RESINS, & ADDITIVES
% Wt: 35-40
OSHA PEL: N/K (FP N)
ACGIH TLV: N/K (FP N)

Name: EFTS OF OVEREXP: BE HARMFUL/FATAL. CHRONIC: AVOID LONG TERM & RPTD CONTACT. THIS PROD CONTAINS TITANIUM DIOXIDE.

Name: ING 8: ANIMALS INHALING MASSIVE QTYS OF TITANIUM DIOIXDE DUST IN LONG-TERM STUDY DEVELOPED LUNG TUMORS. STUDIES

Name: ING 9: W/HUMANS INVOLVED IN MFR OF THIS PIGMENT INDICATE NO INCREASED RISK OF CANCER FROM EXPOS. POTENTIAL FOR

Name: ING 10: INHAL OF TITANIUM DIOXIDE DUSTS FROM COATING IS VERY LIMITED. SINCE OVEREXPS ARE NOT EXPECTED, THERE IS

Name: ING 11: NO SIGNIFICANT HAZARD FOR MAN.

Name: FIRST AID PROC: PRODUCT, CONTACT POISON CONTROL CENTER, EMERGENCY ROOM OR MD IMMEDIATELY; HAVE MSDS INFO AVAILABLE.

Name: RESP PROT: DETERMINE TYPE OF AIRBORNE CONTAMINANTS AGAINST WHICH RESP IS EFTIVE & HOW IT IS TO BE PROPERLY FITTED.

Name: VENT: SUGGESTED EXPOSURE LIMITS, LEL BELOW STATED LIMIT & TO REMOVE DECOMP PRODS DURING WELDING OR FLAME CUTTING.
==========
Health Hazards Data
==========
LD50 LC50 Mixture: NONE SPECIFIED BY MANUFACTURER.
Route Of Entry Inds - Inhalation: YES
Skin: YES
Ingestion: YES
Carcinogenicity Inds - NTP: NO
IARC: NO
OSHA: NO
Effects of Exposure: INGEST: HARMFUL OR FATAL IF SWALLOWED. EYE CONTACT: CAUSES IRRIT. REDNESS, ITCH, BURNING SENSATION & VISUAL DISTURBS MAY INDICATE EXCESSIVE EYE CNTCT. SKIN CONTACT: MAY CAUSE MOD IRRIT. DRYNESS, ITCH, CRACKING, BURNING, REDNESS & SWELL ARECNDTNS ASSOC W/EXCESSIVE SKIN CNTCT. INHAL: VAP & SPRAY MIST (EFTS OF OVEREXP)
Explanation Of Carcinogenicity: NOT RELEVANT
Signs And Symptions Of Overexposure: HLTH HAZ: MAY BE HARMFUL IF INHALED. VAP IRRITATES EYES, NOSE & THROAT. EYE WATERING, HDCH, NAUS, DIZZ & LOSS OF COORD ARE INDICATIONS THAT SOLV LEVELS ARE TOO HIGH. RPTD EXPOS TO HIGH VAP CONCS MAY C AUSE IRRIT OF RESP SYS & PERM BRAIN & NERVOUS SYS DMG. INTENTIONAL MISUSE BY DELIB CONC & INHALING CONTENTS CAN
First Aid: INGEST: DO NOT INDUCE VOMIT. EYES: FLUSH EYES IMMED W/PLENTY OF WATER FOR AT LEAST 30 MIN. SKIN: FLUSH IMMED W/PLENTY OF WATER, FOLLOWED BY WATERLESS HAND CLEANER & SOAP & WATER IF MATL APPEARS TO ADH ERE TO SKIN. INHAL: REMOVE TO FRESH AIR. APPLY ARTF RESP & OTHER SUPPORTIVE MEASURES AS REQD. OTHER: IF INGEST, ANY TYPE OF OVEREXP OR SYMPS OF OVEREXP OCCUR DURING OR FOLLOWING USE OF THIS
==========
Handling and Disposal
==========
Spill Release Procedures: PROVIDE MAX VENT. ONLY PERS EQUIPPED W/PROPER NIOSH APPRVD RESP & SKIN & EYE PROT SHOULD BE PERMITTED IN AREA. REMOVE ALL SOURCES OF IGNIT. TAKE UP SPILLED MATL W/SAWDUST, VERMICULITE OR OTHER ABSORBE NT MATL & PLACE INTO CNTNRS FOR DISPOSAL.
Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.

Waste Disposal Methods: WASTE MATERIAL MUST BE DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL ENVIRONMENTAL CONTROL REGULATIONS. EMPTY CONTAINERS SHOULD BE RECYCLED OR DISPOSED OF THROUGH AN APPROVED WASTE MANAGEMEN T FACILITY.

Handling And Storage Precautions: DO NOT STORE ABOVE 120F. STORE LARGE QUANTITIES IN BUILDINGS DESIGNED AND PROTECTED FOR STORAGE OF NFPA CLASS II COMBUSTIBLE LIQUIDS.

Other Precautions: IF MATL IS PART OF MULTIPLE COMPONENT SYS, READ MSDS(S) FOR OTHER COMPONENT(S) BEFORE BLENDING AS THE RESULTING MIX MAY HAVE HAZS OF ALL OF ITS PARTS. CNTNRS SHOULD BE GROUNDED WHEN POURING. AVOID FRE E FALL OF LIQS IN EXCESS OF FEW INCHES.

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Fire and Explosion Hazard Information

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Flash Point Method: PMCC

Flash Point Text: 110F,43C

Lower Limits: 1.0%

Extinguishing Media: USE NFPA CLASS B EXTINGS (CARBON DIOXIDE, DRY CHEM OR UNIVERSAL AQ FILM FORMING FOAM) DESIGNED TO EXTINGUISH (SUPDAT)

Fire Fighting Procedures: USE NIOSH APPRVD SCBA & FULL PROT EQUIP (FP N). WATER SPRAY MAY BE INEFTIVE. WATER SPRAY MAY BE USED TO COOL CLSD CNTNRS TO PVNT PRESS BUILD-UP & POSS (SUPDAT)

Unusual Fire/Explosion Hazard: KEEP CNTNRS TIGHTLY CLSD. ISOLATE FROM HEAT, ELEC EQUIP, SPKS & OPEN FLAMES. CLSD CNTNRS MAY EXPLODE WHEN EXPOS TO EXTREME HEAT. DO NOT APPLY ON HOT (SUPDAT)

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Control Measures

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Respiratory Protection: OVEREXP TO VAPS MAY BE PREVENTED BY ENSURING VENT CONTROLS, VAP EXHST OR FRESH AIR ENTRY. NIOSH APPRVD (TC-23C) AIR PURIFYING OR AIR SUPPLIED RESP MAY ALSO REDUCE EXPOS. READ RESP MFR'S INSTRUCTIONS & LITERATURE CAREFULLY TO

Ventilation: PROVIDE GEN DILUTION OR LOC EXHST VENT IN VOLUME & PATTERN TO KEEP CONC OF INGREDS LISTED BELOW LOWEST

Protective Gloves: NITRILE RUBBER OR NEOPRENE RUBBER.

Eye Protection: ANSI APPRVD CHEM WORKERS GOGGLES (FP N).

Other Protective Equipment: ANSI APPROVED EYE WASH & DELUGE SHOWER (FP N). WEAR PROTECTIVE CLOTHING INCLUDING IMPERMEABLE APRON.

Work Hygienic Practices: CLEAN OR DISCARD CONTAMINATED CLOTHING AND SHOES.

Supplemental Safety and Health: EXTING MEDIA: NFPA CLASS II COMBUST LIQ FIRES. FIRE FIGHT PROC: AUTOIGNITION OR EXPLOSION WHEN EXPOS TO EXTREME HEAT. IF WATER IS USED, FOG NOZZS ARE PREF. EXPLO HAZ: SURFS. TOXIC GASES MAY FORM WHEN PROD IS CONTACTED BY FLAME OR HOT SURFS. HAZ DECOMP PRODS: MONOXIDE, OXIDES OF NITROGEN, ZINC OXIDE.

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Physical/Chemical Properties

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B.P. Text: >280F,>138C

Vapor Pres: 2.2
Vapor Density: HVR/AIR
Spec Gravity: 1.17
Evaporation Rate & Reference: 18 (BUOAC=100)
Solubility in Water: 0.0%
Appearance and Odor: VISCOUS LIQUID WITH AN ODOR CHARACTERISTIC OF SOLVENTS LISTED IN INGRED SECTION
Percent Volatiles by Volume: 47.20
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Reactivity Data
==========
Stability Indicator: YES
Stability Condition To Avoid: NONE SPECIFIED BY MANUFACTURER.
Materials To Avoid: AVOID CONTACT WITH STRONG ALKALIES, STRONG MINERAL ACIDS OR STRONG OXIDIZING AGENTS.
Hazardous Decomposition Products: MAY PRDCE HAZ DECOMP PRODS WHEN HEATED. WELDING, BRAZING OR FLAME-CUTTING MAY PRDCE FUMES INCLUDING CARBON (SUPDAT)
Hazardous Polymerization Indicator: NO
Conditions To Avoid Polymerization: NOT RELEVANT
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Toxicological Information
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Ecological Information
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MSDS Transport Information
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Regulatory Information
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==========
Other Information
==========
==========
HAZCOM Label
==========
Product ID: INDUSTRIAL WHITE, 7-282
Cage: DO542
Assigned IND: Y
Company Name: PPG INDUSTRIES INC. COATINGS & RESINS GP
Street: 4325 ROSEANNA DR PO BOX 9
PO Box: 9
City: ALLISON PARK PA
Zipcode: 15101
Health Emergency Phone: 304-843-1300
Label Required IND: Y
Date Of Label Review: 03/13/1998

Status Code: C
Label Date: 03/13/1998
Origination Code: G
Chronic Hazard IND: Y
Eye Protection IND: YES
Skin Protection IND: YES
Signal Word: WARNING
Respiratory Protection IND: YES
Health Hazard: Moderate
Contact Hazard: Moderate
Fire Hazard: Moderate
Reactivity Hazard: None
Hazard And Precautions: COMBUSTIBLE LIQUID - CLASS II. ACUTE: INGESTION: HARMFUL OR FATAL IF SWALLOWED. EYES: CAUSES IRRITATION, REDNESS, ITCHING, BURNING SENSATION AND VISUAL DISTURBANCES. SKIN: MAY CAUSE MODERATE IRRITATIO N, DRYNESS, ITCHING, CRACKING, BURNING,REDNESS AND SWELLING. INHALATION: IRRITATION OF EYES, NOSE AND THROAT. EYE WATERING, HEADACHES, NAUSEA, DIZZINESS AND LOSS OF COORDINATION. CHRONIC: REPEATED EXP OSURE TO HIGH CONCENTRATIONS MAY CAUSE IRRITATION OF THE RESPIRATORY SYSTEM AND PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. INTENTIONAL MISUSE MAY BE HARMFUL OR FATAL.

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Disclaimer (provided with this information by the compiling agencies): This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever expressly or implied warrants, states, or intends said information to have any application, use or viability by or to any person or persons outside the Department of Defense nor any person or persons contracting with any instrumentality of the United States of America and disclaims all liability for such use. Any person utilizing this instruction who is not a military or civilian employee of the United States of America should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation regardless of similarity to a corresponding Department of Defense or other government situation.

Material Safety Data Sheet

Date of issue 22 June 2009
Version 6

1 . Product and company identification

Product name : INDUSTRIAL ACRYLIC METAL FINISH

Code : 7-374

Supplier : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)

Technical Phone Number : (412) 492-5200 (ALLISON PARK, PA) 8:00 a.m. - 5:00 p.m. EST

2 . Hazards identification

Emergency overview : WARNING!

MAY BE HARMFUL IF INHALED OR SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled.

Ingestion : May be harmful if swallowed.

Skin : No known significant effects or critical hazards.

Eyes : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation : No specific data.

Ingestion : No specific data.

Skin : No specific data.

Eyes : No specific data.

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See toxicological information (section 11)

3 . Composition/information on ingredients

Name	CAS number	%
titanium dioxide	13463-67-7	10 - 30

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do not use solvents or thinners.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous combustion products : Decomposition products may include the following materials:
carbon oxides
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Do not swallow. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store below the following temperature: 32F / 0C.

8 . Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
titanium dioxide	TWA	10 mg/m³	15 mg/m³ TD	10 mg/m³ TD	10 mg/m³ (as Ti)	Not established
	STEL	Not established	Not established	Not established	20 mg/m³ (as Ti)	Not established

Key to abbreviations

A	= Acceptable Maximum Peak	S	= Potential skin absorption
ACGIH	= American Conference of Governmental Industrial Hygienists.	SR	= Respiratory sensitization
C	= Ceiling Limit	SS	= Skin sensitization
F	= Fume	TD	= Total dust
IPEL	= Internal Permissible Exposure Limit	TLV	= Threshold Limit Value
OSHA	= Occupational Safety and Health Administration.	TWA	= Time Weighted Average
R	= Respirable	Z	= OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes : Safety glasses with side shields.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

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8 . Exposure controls/personal protection

Respiratory : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state : Liquid.
Flash point : Closed cup: >93.33°C (>200°F)
Color : Not available.
Odor : Not available.
pH : Not available.
Boiling/condensation point : >37.78°C (>100°F)
Melting/freezing point : Not available.
Specific gravity : 1.2
Density (lbs / gal) : 10.01
Vapor pressure : 2.3 kPa (17.4 mm Hg)
Vapor density : Not available.
Volatility : 67% (v/v), 55.11% (w/w)
Odor threshold : Not available.
Evaporation rate : 34 (butyl acetate = 1)
Octanol/water partition coefficient : Not available.
% Solid. (w/w) : 44.89

10 . Stability and reactivity

Stability : Stable under recommended storage and handling conditions (see section 7).
Conditions to avoid : No specific data.
Materials to avoid : Reactive or incompatible with the following materials:,acids
Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
titanium dioxide	LD50 Oral	Rat	>10 g/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

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11 . Toxicological information

Target organs : Contains material which may cause damage to the following organs: lungs, upper respiratory tract, skin.

Carcinogenicity

Conclusion/Summary : Not available.

Carcinogenicity : Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
titanium dioxide	A4	2B	-	-	-	-

Mutagenicity

Conclusion/Summary : Not available.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity

Conclusion/Summary : Not available.

Teratogenicity : No known significant effects or critical hazards.

Reproductive toxicity

Conclusion/Summary : Not available.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
titanium dioxide	Acute LC50 5.5 ppm Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 1 ppm Fresh water	Daphnia - Water flea - Daphnia magna	48 hours

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

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14 . Transport information

Regulation	UN number	Proper shipping name	Classes	PG*	Additional information
UN	None.	Not regulated.	None.	-	-
IMDG	None.	Not regulated.	None.	-	-
DOT	None.	Not regulated.	Not available.	-	-

PG* : Packing group

Reportable quantity RQ : CERCLA: Hazardous substances.: No products were found.

15 . Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.
Australia inventory (AICS) : All components are listed or exempted.
Canada inventory : All components are listed or exempted.
China inventory (IECSC) : All components are listed or exempted.
Europe inventory : All components are listed or exempted.
Japan inventory (ENCS) : At least one component is not listed.
Korea inventory (KECI) : All components are listed or exempted.
New Zealand : Not determined.
Philippines inventory (PICCS) : Not determined.

United States

U.S. Federal regulations : TSCA 12(b) annual export notification: No products were found.
TSCA 12(b) one-time export: No products were found.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: titanium dioxide
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: titanium dioxide: Immediate (acute) health hazard
CERCLA: Hazardous substances.: No products were found.

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

Canada

WHMIS (Canada) : Class D-2B: Material causing other toxic effects (Toxic).

Mexico

Classification

Flammability : 1 **Health** : 1 **Reactivity** : 0

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 1 * **Flammability** : 1 **Physical hazards** : 0
(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

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16 . Other information

Health : 1 **Flammability** : 1 **Instability** : 0

Date of previous issue : **No previous validation.**

Organization that prepared the MSDS : EHS

Indicates information that has changed from previously issued version.

Disclaimer

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Material Safety Data Sheet

Date of issue 23 May 2014
Version 39.01

1 . Product and company identification

Product name : I/E INDUSTRIAL GLOSS OIL SAFETY/BLAZE ORANGE

Code : 7-805

Supplier : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)

Technical Phone Number : 888-977-4762

2 . Hazards identification

Emergency overview : WARNING!

COMBUSTIBLE LIQUID AND VAPOR. CAUSES RESPIRATORY TRACT AND EYE IRRITATION. MAY BE HARMFUL IF INHALED OR SWALLOWED. SANDING AND GRINDING DUSTS MAY BE HARMFUL IF INHALED. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

Keep away from heat, sparks and flame. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled. Irritating to respiratory system. Can irritate eyes, nose, mouth and throat. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Ingestion : May be harmful if swallowed.

Skin : Moderately irritating to the skin.

Eyes : Severely irritating to eyes. Risk of serious damage to eyes.

Over-exposure signs/symptoms

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone.

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See toxicological information (Section 11)

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3 . Composition/information on ingredients

Name	CAS number	%
Stoddard solvent	8052-41-3	10 - 30
Kaolin	1332-58-7	10 - 30
titanium dioxide	13463-67-7	1 - 5
Naphtha (petroleum), hydrotreated heavy	64742-48-9	1 - 5
m-xylene	108-38-3	0.5 - 1.5
2-butanone oxime	96-29-7	0.1 - 1
ethylbenzene	100-41-4	0.1 - 1
neodecanoic acid, cobalt salt	27253-31-2	0.1 - 1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

5 . Fire-fighting measures

Flammability of the product : Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.

Extinguishing media

Suitable : Use dry chemical, CO_2, water spray (fog) or foam.

Not suitable : Do not use water jet.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products : Decomposition products may include the following materials:
carbon oxides
nitrogen oxides
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

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6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Use spark-proof tools and explosion-proof equipment. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling : Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite. To avoid the risks of fires, all contaminated materials should be placed in a metal container filled with water and sealed. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside. Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Ingestion of product or cured coating may be harmful. Do not swallow. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. Vapors are heavier than air and may spread along floors. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Storage : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store above the following temperature: 120F / 49C.

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8 . Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
Stoddard solvent	TWA	100 ppm	500 ppm	100 ppm	100 ppm	Not established
	STEL	Not established	Not established	Not established	200 ppm	Not established
Kaolin	TWA	2 mg/m³ R	15 mg/m³ TD 5 mg/m³ R	2 mg/m³ R	10 mg/m³	Not established
	STEL	Not established	Not established	Not established	20 mg/m³	Not established
titanium dioxide	TWA	10 mg/m³	15 mg/m³ TD	10 mg/m³ TD	10 mg/m³ (as Ti)	Not established
	STEL	Not established	Not established	Not established	20 mg/m³ (as Ti)	Not established
m-xylene	TWA	100 ppm	100 ppm	100 ppm	100 ppm	Not established
	STEL	150 ppm	Not established	150 ppm	150 ppm	Not established
2-butanone oxime	TWA	Not established	Not established	Not established	Not established	3 ppm
	STEL	Not established	Not established	Not established	Not established	10 ppm
ethylbenzene	TWA	20 ppm	100 ppm	20 ppm	100 ppm	Not established
	STEL	Not established	Not established	Not established	125 ppm	Not established

Key to abbreviations

A = Acceptable Maximum Peak
ACGIH = American Conference of Governmental Industrial Hygienists.
C = Ceiling Limit
F = Fume
IPEL = Internal Permissible Exposure Limit
OSHA = Occupational Safety and Health Administration.
R = Respirable
Z = OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances
S = Potential skin absorption
SR = Respiratory sensitization
SS = Skin sensitization
STEL = Short term Exposure limit values
TD = Total dust
TLV = Threshold Limit Value
TWA = Time Weighted Average

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Engineering measures : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

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8 . Exposure controls/personal protection

Eyes : Chemical splash goggles.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Gloves : For prolonged or repeated handling, use the following type of gloves:

Recommended: nitrile rubber

Respiratory : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state : Liquid.

Flash point : Closed cup: 43.33°C (110°F)

Explosion limits : Lower: 1%

Material supports combustion. : Yes.

Color : Not available.

Odor : Not available.

pH : Not available.

Boiling/condensation point : >37.78°C (>100°F)

Melting/freezing point : Not available.

Specific gravity : 1.06

Density (lbs / gal) : 8.85

Vapor pressure : 0.4 kPa (3 mm Hg) [room temperature]

Vapor density : Not available.

Volatility : 44% (v/v), 31.5% (w/w)

Evaporation rate : 0.61 (butyl acetate = 1)

Solubility : Soluble in the following materials: cold water.

Partition coefficient: n-octanol/water : Not available.

% Solid. (w/w) : 68.5

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10 . Stability and reactivity

Stability : Stable under recommended storage and handling conditions (see Section 7).

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Materials to avoid : Reactive or incompatible with the following materials:,acids,oxidizing materials,strong alkalis

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Stoddard solvent	LD50 Oral	Rat	>5 g/kg	-
Kaolin	LD50 Oral	Rat	>5000 mg/kg	-
titanium dioxide	LD50 Oral	Rat	>10 g/kg	-
Naphtha (petroleum), hydrotreated heavy	LD50 Oral	Rat	>6 g/kg	-
	LC50 Inhalation	Rat	8500 mg/m3	4 hours
m-xylene	LD50 Oral	Rat	4988 mg/kg	-
	LD50 Dermal	Rabbit	5 g/kg	-
2-butanone oxime	LD50 Oral	Rat	930 mg/kg	-
	LD50 Dermal	Rabbit	200 uL/kg	-
ethylbenzene	LD50 Oral	Rat	3.5 g/kg	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LC50 Inhalation Vapor	Rat	4000 ppm	4 hours

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Defatting irritant : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Target organs : Contains material which causes damage to the following organs: brain, central nervous system (CNS).
Contains material which may cause damage to the following organs: blood, kidneys, lungs, the nervous system, liver, gastrointestinal tract, upper respiratory tract, skin, eye, lens or cornea, stomach, testes.

Carcinogenicity

Carcinogenicity : Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	ACGIH	IARC	NTP	OSHA
Kaolin	A4	-	-	-
titanium dioxide	A4	2B	-	-
m-xylene	A4	3	-	-
ethylbenzene	A3	2B	-	-
neodecanoic acid, cobalt salt	-	2B	-	-

Carcinogen Classification code:
ACGIH: A1, A2, A3, A4, A5
IARC: 1, 2A, 2B, 3, 4
NTP: Proven, Possible
OSHA: +
Not listed or regulated as a carcinogen: -

Fertility effects : Contains material which may impair male fertility, based on animal data.

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12 . Ecological information

Environmental effects : Water polluting material. May be harmful to the environment if released in large quantities.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
ethylbenzene	Acute LC50 150 to 200 mg/L Fresh water	Fish - Bluegill - Lepomis macrochirus	96 hours

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14. Transport information

	DOT	TDG	Mexico	IMDG
UN number	UN1263	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3	3
Packing group	III	III	III	III
Environmental hazards	No.	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.	Not applicable.

Additional information

DOT : This product may be re-classified as "Combustible Liquid," unless transported by vessel or aircraft. Non-bulk packages (less than or equal to 119 gal) of combustible liquids are not regulated as hazardous materials.

TDG : None identified.

Mexico : None identified.

IMDG : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

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14. Transport information

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

15 . Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.
Australia inventory (AICS) : At least one component is not listed.
Canada inventory (DSL) : At least one component is not listed in DSL but all such components are listed in NDSL.
China inventory (IECSC) : At least one component is not listed.
Europe inventory (REACH) : Please contact your supplier for information on the inventory status of this material.
Japan inventory (ENCS) : At least one component is not listed.
Korea inventory (KECI) : At least one component is not listed.
New Zealand (NZIoC) : Substance Use Restricted
Philippines inventory (PICCS) : At least one component is not listed.

United States

U.S. Federal regulations :

SARA 302/304: No products were found.
CERCLA: Hazardous substances.: neodecanoic acid, cobalt salt: No RQ is being assigned to the generic or broad class. ; ethylbenzene: 1000 lbs. (454 kg); m-xylene: 1000 lbs. (454 kg);

SARA 311/312 SDS Distribution - Chemical Inventory - Hazard Identification:

Chemical name	CAS #	Acute	Chronic	Fire	Reactive	Pressure
Stoddard solvent	8052-41-3	Y	N	Y	N	N
Kaolin	1332-58-7	Y	N	N	N	N
titanium dioxide	13463-67-7	N	Y	N	N	N
Naphtha (petroleum), hydrotreated heavy	64742-48-9	Y	N	Y	N	N
m-xylene	108-38-3	Y	N	Y	N	N
2-butanone oxime	96-29-7	Y	Y	Y	Y	N
ethylbenzene	100-41-4	Y	Y	Y	N	N
neodecanoic acid, cobalt salt	27253-31-2	Y	Y	N	N	N
Product as-supplied :		Y	Y	Y	N	N

SARA 313
Supplier notification :

Chemical name	CAS number	Concentration
m-xylene	108-38-3	0.5 - 1.5
ethylbenzene	100-41-4	0.1 - 1

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Canada

WHMIS (Canada) : Class B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

Mexico

Classification

Flammability : 2 **Health** : 3 **Reactivity** : 0

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16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 3 * **Flammability** : 2 **Physical hazards** : 0
(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 3 **Flammability** : 2 **Instability** : 0

Date of previous issue : **5/18/2014.**

Organization that prepared the MSDS : EHS

Indicates information that has changed from previously issued version.

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

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Material Safety Data Sheet

Date of issue 16 May 2014
Version 40

1 . Product and company identification

Product name : INT/EXT INDUSTRIAL OIL GLOSS BLACK

Code : 7-809

Supplier : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)

Technical Phone Number : 888-977-4762

2 . Hazards identification

Emergency overview : DANGER!

COMBUSTIBLE LIQUID AND VAPOR. CAUSES RESPIRATORY TRACT AND EYE IRRITATION. MAY BE HARMFUL IF INHALED OR SWALLOWED. ASPIRATION HAZARD. CAN ENTER LUNGS AND CAUSE DAMAGE. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

Keep away from heat, sparks and flame. Do not swallow. Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled. Irritating to respiratory system. Can irritate eyes, nose, mouth and throat.

Ingestion : May be harmful if swallowed. Aspiration hazard if swallowed. Can enter lungs and cause damage.

Skin : May cause skin dryness and irritation.

Eyes : Irritating to eyes.

Over-exposure signs/symptoms

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone.

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See toxicological information (Section 11)

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3 . Composition/information on ingredients

Name	CAS number	%
Stoddard solvent	8052-41-3	10 - 30
Limestone	1317-65-3	10 - 30
proprietary hydrocarbon resin	Not available.	1 - 5
Kaolin	1332-58-7	1 - 5
Solvent naphtha (petroleum), medium aliph.	64742-88-7	1 - 5
carbon black respirable	1333-86-4	1 - 5
xylene	1330-20-7	0.1 - 1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.

Extinguishing media

Suitable : Use dry chemical, CO_2, water spray (fog) or foam.

Not suitable : Do not use water jet.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products : Decomposition products may include the following materials:
carbon oxides
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

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6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Use spark-proof tools and explosion-proof equipment. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling : Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite. To avoid the risks of fires, all contaminated materials should be placed in a metal container filled with water and sealed. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside. Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Do not swallow. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. Vapors are heavier than air and may spread along floors. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Storage : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store above the following temperature: 120F / 49C.

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8 . Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
Stoddard solvent	TWA STEL	100 ppm Not established	500 ppm Not established	100 ppm Not established	100 ppm 200 ppm	Not established Not established
Limestone	TWA STEL	Not established Not established	15 mg/m³ TD 5 mg/m³ R Not established	Not established Not established	10 mg/m³ 20 mg/m³	Not established Not established
proprietary hydrocarbon resin	TWA	10 mg/m³	Not established	Not established	Not established	Not established
Kaolin	TWA STEL	2 mg/m³ R Not established	15 mg/m³ TD 5 mg/m³ R Not established	2 mg/m³ R Not established	10 mg/m³ 20 mg/m³	Not established Not established
Solvent naphtha (petroleum), medium aliph.	TWA	400 ppm	100 ppm 100 ppm	Not established	Not established	Not established
carbon black respirable	TWA STEL	3 mg/m³ Not established	3.5 mg/m³ Not established	3 mg/m³ Not established	3.5 mg/m³ 7 mg/m³	Not established Not established
xylene	TWA STEL	100 ppm 150 ppm	100 ppm Not established	100 ppm 150 ppm	100 ppm 150 ppm	Not established Not established

Key to abbreviations

A = Acceptable Maximum Peak
ACGIH = American Conference of Governmental Industrial Hygienists.
C = Ceiling Limit
F = Fume
IPEL = Internal Permissible Exposure Limit
OSHA = Occupational Safety and Health Administration.
R = Respirable
Z = OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances
S = Potential skin absorption
SR = Respiratory sensitization
SS = Skin sensitization
STEL = Short term Exposure limit values
TD = Total dust
TLV = Threshold Limit Value
TWA = Time Weighted Average

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Engineering measures : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

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8 . Exposure controls/personal protection

Personal protection

Eyes : Safety glasses with side shields.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Gloves : For prolonged or repeated handling, use the following type of gloves:

Recommended: nitrile rubber

Respiratory : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state : Liquid.

Flash point : Closed cup: 43.33°C (110°F)

Explosion limits : Lower: 1%

Material supports combustion. : Yes.

Color : Not available.

Odor : Not available.

pH : Not available.

Boiling/condensation point : >37.78°C (>100°F)

Melting/freezing point : Not available.

Specific gravity : 1.12

Density (lbs / gal) : 9.35

Vapor pressure : 0.31 kPa (2.3 mm Hg) [room temperature]

Vapor density : Not available.

Volatility : 43% (v/v), 29.96% (w/w)

Evaporation rate : 0.05 (butyl acetate = 1)

Solubility : Soluble in the following materials: cold water.

Partition coefficient: n-octanol/water : Not available.

% Solid. (w/w) : 70.04

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10 . Stability and reactivity

Stability : Stable under recommended storage and handling conditions (see Section 7).

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Materials to avoid : Reactive or incompatible with the following materials:,acids,oxidizing materials,strong alkalis

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Stoddard solvent	LD50 Oral	Rat	>5 g/kg	-
Kaolin	LD50 Oral	Rat	>5000 mg/kg	-
Solvent naphtha (petroleum), medium aliph.	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Dermal	Rabbit	>3000 mg/kg	-
carbon black respirable	LD50 Oral	Rat	>15400 mg/kg	-
	LD50 Dermal	Rabbit	>3 g/kg	-
xylene	LD50 Oral	Rat	4.3 g/kg	-
	LD50 Dermal	Rabbit	>1.7 g/kg	-
	LC50 Inhalation Vapor	Rat	5000 ppm	4 hours

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Defatting irritant : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Target organs : Contains material which causes damage to the following organs: brain, skin, central nervous system (CNS).
Contains material which may cause damage to the following organs: kidneys, lungs, liver, upper respiratory tract, eye, lens or cornea, stomach, testes.

Carcinogenicity

Carcinogenicity : Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	ACGIH	IARC	NTP	OSHA
Kaolin	A4	-	-	-
carbon black respirable	A3	2B	-	-

Carcinogen Classification code:
ACGIH: A1, A2, A3, A4, A5
IARC: 1, 2A, 2B, 3, 4
NTP: Proven, Possible
OSHA: +
Not listed or regulated as a carcinogen: -

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12 . Ecological information

Environmental effects : Water polluting material. May be harmful to the environment if released in large quantities.

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14. Transport information

	DOT	TDG	Mexico	IMDG
UN number	UN1263	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3	3
Packing group	III	III	III	III
Environmental hazards	No.	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.	Not applicable.
Product RQ (lbs)	42542.6	Not applicable.	Not applicable.	Not applicable.
RQ substances	(xylene)	Not applicable.	Not applicable.	Not applicable.

Additional information

DOT : This product may be re-classified as "Combustible Liquid," unless transported by vessel or aircraft. Non-bulk packages (less than or equal to 119 gal) of combustible liquids are not regulated as hazardous materials in package sizes less than the product reportable quantity.

TDG : None identified.

Mexico : None identified.

IMDG : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

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15 . Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.
Australia inventory (AICS) : At least one component is not listed.
Canada inventory (DSL) : At least one component is not listed.
China inventory (IECSC) : At least one component is not listed.
Europe inventory (REACH) : Please contact your supplier for information on the inventory status of this material.
Japan inventory (ENCS) : At least one component is not listed.
Korea inventory (KECI) : Not determined.
New Zealand (NZIoC) : At least one component is not listed.
Philippines inventory (PICCS) : At least one component is not listed.

United States

U.S. Federal regulations :

SARA 302/304: No products were found.
CERCLA: Hazardous substances.: xylene: 100 lbs. (45.4 kg);

SARA 311/312 SDS Distribution - Chemical Inventory - Hazard Identification:

Chemical name	CAS #	Acute	Chronic	Fire	Reactive	Pressure
Stoddard solvent	8052-41-3	Y	N	Y	N	N
Limestone	1317-65-3	N	N	N	N	N
proprietary hydrocarbon resin	Not available.	N	N	N	N	N
Kaolin	1332-58-7	Y	N	N	N	N
Solvent naphtha (petroleum), medium aliph.	64742-88-7	Y	N	Y	N	N
carbon black respirable	1333-86-4	N	Y	N	N	N
	Product as-supplied :	Y	Y	Y	N	N

:

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Canada

WHMIS (Canada) : Class B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

Mexico

Classification

Flammability : 2 **Health** : 2 **Reactivity** : 0

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 2 * **Flammability** : 2 **Physical hazards** : 0
(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

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16 . Other information

Health : 2 **Flammability** : 2 **Instability** : 0

Date of previous issue : **3/12/2014.**

Organization that prepared the MSDS : EHS

◤ **Indicates information that has changed from previously issued version.**

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

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Material Safety Data Sheet

PPG High Performance Coatings

Date of issue 13 April 2011
Version 27

1 . Product and company identification

Product name : INT/EXT INDUSTRIAL GLOSS OIL PASTEL

Code : 7-814

Supplier : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)

Technical Phone Number : 1-800-441-9695 (8:00 am to 5:00 pm EST)

2 . Hazards identification

Emergency overview : WARNING!

COMBUSTIBLE LIQUID AND VAPOR. CAUSES RESPIRATORY TRACT IRRITATION. MAY BE HARMFUL IF INHALED OR SWALLOWED. SANDING AND GRINDING DUSTS MAY BE HARMFUL IF INHALED. MAY CAUSE EYE IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER.

Keep away from heat, sparks and flame. Do not swallow. Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled. Irritating to respiratory system. Can irritate eyes, nose, mouth and throat.

Ingestion : May be harmful if swallowed.

Skin : Moderately irritating to the skin.

Eyes : Moderately irritating to eyes.

Over-exposure signs/symptoms

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone. This product contains crystalline silica which can cause lung cancer or silicosis. The risk of cancer depends on the duration and level of exposure to dust from sanding surfaces or mist from spray applications.

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See toxicological information (Section 11)

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3 . Composition/information on ingredients

Name	CAS number	%
Stoddard solvent	8052-41-3	10 - 30
proprietary alkyd resin	Not available.	10 - 30
Titanium dioxide	13463-67-7	7 - 13
Limestone	1317-65-3	7 - 13
Kaolin	1332-58-7	1 - 5
proprietary hydrocarbon resin	Not available.	1 - 5
Zinc oxide	1314-13-2	0.5 - 1.5
Silicon dioxide	7631-86-9	0.5 - 1.5
Solvent naphtha (petroleum), light arom.	64742-95-6	0.5 - 1.5
xylene	1330-20-7	0.1 - 1
Quartz (SiO2) (<10 microns)	14808-60-7	0.1 - 1
2-butanone oxime	96-29-7	0.1 - 1
neodecanoic acid, cobalt salt	27253-31-2	0.1 - 1
1,2,4-trimethylbenzene	95-63-6	0.1 - 1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.

Extinguishing media

Suitable : Use dry chemical, CO_2, water spray (fog) or foam.

Not suitable : Do not use water jet.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products : Decomposition products may include the following materials:
carbon oxides
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

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6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Use spark-proof tools and explosion-proof equipment. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling : Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite. To avoid the risks of fires, all contaminated materials should be placed in a metal container filled with water and sealed. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside. Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Ingestion of product or cured coating may be harmful. Do not swallow. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. Vapors are heavier than air and may spread along floors. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Storage : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store above the following temperature: 120F / 49C.

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8 . Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
Stoddard solvent	TWA STEL	100 ppm Not established	500 ppm Not established	100 ppm Not established	100 ppm 200 ppm	Not established Not established
Titanium dioxide	TWA STEL	10 mg/m³ Not established	15 mg/m³ TD Not established	10 mg/m³ TD Not established	10 mg/m³ (as Ti) 20 mg/m³ (as Ti)	Not established Not established
Limestone	TWA STEL	Not established Not established	5 mg/m³ R 15 mg/m³ TD Not established	Not established Not established	10 mg/m³ 20 mg/m³	Not established Not established
Kaolin	TWA STEL	2 mg/m³ R Not established	5 mg/m³ R 15 mg/m³ TD Not established	2 mg/m³ R Not established	10 mg/m³ 20 mg/m³	Not established Not established
proprietary hydrocarbon resin	TWA	10 mg/m³	Not established	Not established	Not established	Not established
Zinc oxide	TWA STEL	2 mg/m³ R 10 mg/m³ R	5 mg/m³ F 5 mg/m³ R 15 mg/m³ TD Not established	2 mg/m³ R 10 mg/m³ R	10 mg/m³ 5 mg/m³ 10 mg/m³	Not established Not established
Silicon dioxide	TWA	Not established	Not established	Not established	10 mg/m³ 3 mg/m³ R	Not established
xylene	TWA STEL	100 ppm 150 ppm	100 ppm Not established	100 ppm 150 ppm	100 ppm 150 ppm	Not established Not established
Quartz (SiO2) (<10 microns)	TWA	0.025 mg/m³ R	10 mg/m³ R Z 30 mg/m³ TD Z 250 mppcf R Z	0.1 mg/m³ R	0.1 mg/m³ R	Not established
2-butanone oxime	TWA STEL	Not established Not established	Not established Not established	Not established Not established	Not established Not established	3 ppm 10 ppm
1,2,4-trimethylbenzene	TWA STEL	25 ppm Not established	Not established Not established	25 ppm Not established	25 ppm 35 ppm	Not established Not established

Key to abbreviations

A = Acceptable Maximum Peak
ACGIH = American Conference of Governmental Industrial Hygienists.
C = Ceiling Limit
F = Fume
IPEL = Internal Permissible Exposure Limit
S = Potential skin absorption
SR = Respiratory sensitization
SS = Skin sensitization
STEL = Short term Exposure limit values
TD = Total dust

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8 . Exposure controls/personal protection

OSHA = Occupational Safety and Health Administration.
R = Respirable
Z = OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances
TLV = Threshold Limit Value
TWA = Time Weighted Average

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes : Safety glasses with side shields.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Gloves : For prolonged or repeated handling, use the following type of gloves:

Recommended: nitrile rubber, foil, fluor rubber

Respiratory : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state : Liquid.

Flash point : Closed cup: 45°C (113°F)

Explosion limits : Lower: 1%

Material supports combustion. : Yes.

Color : Not available.

Odor : Not available.

pH : Not available.

Boiling/condensation point : >37.78°C (>100°F)

Melting/freezing point : Not available.

Specific gravity : 1.2

Density (lbs / gal) : 10.01

Vapor pressure : 0.28 kPa (2.1 mm Hg) [20°C]

Vapor density : Not available.

Volatility : 42% (v/v), 27.86% (w/w)

Evaporation rate : 24 (butyl acetate = 1)

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9 . Physical and chemical properties

Partition coefficient: n-octanol/water : Not available.

% Solid. (w/w) : 72.14

10 . Stability and reactivity

Stability : Stable under recommended storage and handling conditions (see section 7).

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Materials to avoid : Reactive or incompatible with the following materials:,acids,oxidizing materials,strong alkalis

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Stoddard solvent	LD50 Oral	Rat	>5 g/kg	-
Titanium dioxide	LD50 Oral	Rat	>10 g/kg	-
Kaolin	LD50 Oral	Rat	>5000 mg/kg	-
Solvent naphtha (petroleum), light arom.	LD50 Oral	Rat	8400 mg/kg	-
	LD50 Dermal	Rabbit	3.48 g/kg	-
xylene	LD50 Oral	Rat	4.3 g/kg	-
	LD50 Dermal	Rabbit	>1.7 g/kg	-
	LC50 Inhalation Vapor	Rat	5000 ppm	4 hours
2-butanone oxime	LD50 Oral	Rat	930 mg/kg	-
	LD50 Dermal	Rabbit	200 uL/kg	-
1,2,4-trimethylbenzene	LD50 Oral	Rat	5 g/kg	-
	LC50 Inhalation	Rat	18000 mg/m3	4 hours

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Defatting irritant : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Target organs : Contains material which causes damage to the following organs: brain, central nervous system (CNS).
Contains material which may cause damage to the following organs: kidneys, lungs, upper respiratory tract, skin, eye, lens or cornea, stomach.

Carcinogenicity

Carcinogenicity : Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Titanium dioxide	A4	2B	-	-	-	-
Kaolin	A4	-	-	-	-	-
Zinc oxide	A4	-	-	-	-	-
Silicon dioxide	-	3	-	-	-	-
Quartz (SiO2) (<10 microns)	A2	1	-	+	Proven.	-
neodecanoic acid, cobalt salt	-	2B	-	-	-	-

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12 . Ecological information

Environmental effects : Water polluting material. May be harmful to the environment if released in large quantities.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Titanium dioxide	Acute EC50 >1000000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
Zinc oxide	Acute LC50 1.1 to 2.5 ppm Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours
	Acute LC50 98 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 0.4 mg/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
xylene	Acute LC50 3300 to 4093 ug/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours
2-butanone oxime	Acute LC50 843000 to 914000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
1,2,4-trimethylbenzene	Acute LC50 7720 to 8280 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14 . Transport information

Regulation	UN number	Proper shipping name	Classes	PG*	Additional information
UN	1263	PAINT	3	III	-
IMDG	1263	PAINT. Marine pollutant (Solvent naphtha (petroleum), light arom., Zinc oxide)	3	III	-
DOT	1263	PAINT	3	III	**Remarks** USA Only: Can be reclassified as Combustible Liquid. Non-Bulk highway shipments (Less than or Equal to 450Liters) can be shipped as non-regulated.

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14 . Transport information

PG* : Packing group

Reportable quantity RQ : CERCLA: Hazardous substances.: neodecanoic acid, cobalt salt; Zinc oxide; xylene: 100 lbs. (45.4 kg);

15 . Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.
Australia inventory (AICS) : At least one component is not listed.
Canada inventory (DSL) : At least one component is not listed.
China inventory (IECSC) : Not determined.
Europe inventory (REACH) : Please contact your supplier for information on the inventory status of this material.
Japan inventory (ENCS) : At least one component is not listed.
Korea inventory (KECI) : Not determined.
New Zealand (NZIoC) : Substance Use Restricted
Philippines inventory (PICCS) : At least one component is not listed.

United States

U.S. Federal regulations :

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Stoddard solvent; Kaolin; Limestone; Zinc oxide; Titanium dioxide
CERCLA: Hazardous substances.: neodecanoic acid, cobalt salt; Zinc oxide; xylene: 100 lbs. (45.4 kg);

SARA 311/312 MSDS Distribution - Chemical Inventory - Hazard Identification:

Chemical name	CAS #	Acute	Chronic	Fire	Reactive	Pressure
Stoddard solvent	8052-41-3	Y	N	Y	N	N
proprietary alkyd resin	Not available.	N	N	N	N	N
Titanium dioxide	13463-67-7	N	Y	N	N	N
Limestone	1317-65-3	N	N	N	N	N
Kaolin	1332-58-7	Y	N	N	N	N
proprietary hydrocarbon resin	Not available.	N	N	N	N	N
Zinc oxide	1314-13-2	N	N	N	N	N
Silicon dioxide	7631-86-9	N	N	N	N	N
Solvent naphtha (petroleum), light arom.	64742-95-6	Y	N	N	N	N
Quartz (SiO2) (<10 microns)	14808-60-7	N	Y	N	N	N
2-butanone oxime	96-29-7	Y	Y	Y	Y	N
neodecanoic acid, cobalt salt	27253-31-2	Y	Y	N	N	N
Product as-supplied :		Y	Y	Y	N	N

SARA 313
Supplier notification :

Chemical name	CAS number	Concentration
Zinc oxide	1314-13-2	0.5 - 1.5
neodecanoic acid, cobalt salt	27253-31-2	0.1 - 1

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Canada

WHMIS (Canada) : Class B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

Mexico

Classification

Flammability : 2 **Health** : 2 **Reactivity** : 0

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16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 2 * **Flammability** : 2 **Physical hazards** : 0
(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 2 **Flammability** : 2 **Instability** : 0

Date of previous issue : **2/5/2011.**

Organization that prepared the MSDS : EHS

Indicates information that has changed from previously issued version.

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

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Material Safety Data Sheet

Date of issue 30 June 2009
Version 9.2

1 . Product and company identification

Product name : INT/EXT INDUSTRIAL GLOSS OIL MIDTONE

Code : 7-815

Supplier : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)

Technical Phone Number : (412) 492-5200 (ALLISON PARK, PA) 8:00 a.m. - 5:00 p.m. EST

2 . Hazards identification

Emergency overview : WARNING!

COMBUSTIBLE LIQUID AND VAPOR. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF INHALED, ABSORBED THROUGH SKIN OR SWALLOWED. SANDING AND GRINDING DUSTS MAY BE HARMFUL IF INHALED. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

Keep away from heat, sparks and flame. Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled. Irritating to respiratory system. Can irritate eyes, nose, mouth and throat.

Ingestion : May be harmful if swallowed.

Skin : Harmful in contact with skin. Irritating to skin.

Eyes : Irritating to eyes.

Over-exposure signs/symptoms

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone.

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See toxicological information (section 11)

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3 . Composition/information on ingredients

Name	CAS number	%
Stoddart solvent	8052-41-3	30 - 60
titanium dioxide	13463-67-7	10 - 30
kaolin	1332-58-7	7 - 13
Nepheline syenite	37244-96-5	5 - 10
Limestone	1317-65-3	3 - 7
Silicic acid	1343-98-2	1 - 5
solvent naphtha (petroleum), light arom.	64742-95-6	1 - 5
xylene	1330-20-7	0.5 - 1.5
zinc oxide	1314-13-2	0.5 - 1.5
2-butanone oxime	96-29-7	0.1 - 1
ethylbenzene	100-41-4	0.1 - 1
1,2,4-trimethylbenzene	95-63-6	0.1 - 1
neodecanoic acid, cobalt salt	27253-31-2	0.1 - 1
2-(2-methoxyethoxy)ethanol	111-77-3	0.1 - 1
cobalt bis(2-ethylhexanoate)	136-52-7	0.1 - 1
2-ethylhexanoic acid	149-57-5	0.1 - 1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do not use solvents or thinners.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.

Extinguishing media

Suitable : Use dry chemical, CO_2, water spray (fog) or foam.

Not suitable : Do not use water jet.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Hazardous combustion products : Decomposition products may include the following materials:
carbon oxides
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

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6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Use spark-proof tools and explosion-proof equipment. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling : Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite. To avoid the risks of fires, all contaminated materials should be placed in a metal container filled with water and sealed. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside. Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Ingestion of product or cured coating may be harmful. Do not swallow. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. Vapors are heavier than air and may spread along floors. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Storage : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store above the following temperature: 120F / 49C.

8 . Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
Stoddart solvent	TWA	100 ppm	500 ppm	525 mg/m³	100 ppm	Not established
	STEL	Not established	Not established	Not established	200 ppm	Not established
titanium dioxide	TWA	10 mg/m³	15 mg/m³ TD	10 mg/m³ TD	10 mg/m³ (as Ti)	Not established
	STEL	Not established	Not established	Not established	20 mg/m³ (as Ti)	Not established
kaolin	TWA	2 mg/m³ R	5 mg/m³ R 15 mg/m³ TD	2 mg/m³ R TD	10 mg/m³	Not established
	STEL	Not established	Not established	Not established	20 mg/m³	Not established
Nepheline syenite	TWA	10 MG/M3 TD 3 MG/M3 R	15 mg/m3 TD 5 mg/m3 R 15 mg/m3	10 mg/m³ TD	Not established	Not established
Limestone	TWA	Not established	5 mg/m³ R 15 mg/m³ TD	10 mg/m³ TD	10 mg/m³	Not established
	STEL	Not established	Not established	Not established	20 mg/m³	Not established
xylene	TWA	100 ppm	100 ppm	100 ppm	100 ppm	Not established
	STEL	150 ppm	Not established	150 ppm	150 ppm	Not established
zinc oxide	TWA	2 mg/m³	5 mg/m³ F 5 mg/m³ R 15 mg/m³ TD	2 mg/m³ R TD	10 mg/m³ 5 mg/m³	Not established
	STEL	10 mg/m³	Not established	10 mg/m³ R TD	10 mg/m³	Not established
2-butanone oxime	TWA	Not established	Not established	Not established	Not established	3 ppm
	STEL	Not established	Not established	Not established	Not established	10 ppm
ethylbenzene	TWA	100 ppm	100 ppm	100 ppm	100 ppm	Not established
	STEL	125 ppm	Not established	125 ppm	125 ppm	Not established
1,2,4-trimethylbenzene	TWA	25 ppm	Not established	25 ppm	25 ppm	Not established
	STEL	Not established	Not established	Not established	35 ppm	Not established
2-(2-methoxyethoxy)ethanol	TWA	Not established	Not established	Not established	Not established	30 ppm
2-ethylhexanoic acid	TWA	5 mg/m³	Not established	5 mg/m³	Not established	Not established

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8 . Exposure controls/personal protection

Key to abbreviations

A	=	Acceptable Maximum Peak	S	=	Potential skin absorption
ACGIH	=	American Conference of Governmental Industrial Hygienists.	SR	=	Respiratory sensitization
C	=	Ceiling Limit	SS	=	Skin sensitization
F	=	Fume	TD	=	Total dust
IPEL	=	Internal Permissible Exposure Limit	TLV	=	Threshold Limit Value
OSHA	=	Occupational Safety and Health Administration.	TWA	=	Time Weighted Average
R	=	Respirable	Z	=	OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes : Safety glasses with side shields.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Gloves : For prolonged or repeated handling, use the following type of gloves:

Recommended: nitrile rubber, foil, fluor rubber

Respiratory : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state : Liquid.

Flash point : Closed cup: 44.44°C (112°F)

Explosion limits : Lower: 1%

Color : Not available.

Odor : Not available.

pH : Not available.

Boiling/condensation point : >37.78°C (>100°F)

Melting/freezing point : Not available.

Specific gravity : 1.14

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9 . Physical and chemical properties

Density (lbs / gal) : 9.51
Vapor pressure : 0.28 kPa (2.1 mm Hg)
Vapor density : Not available.
Volatility : 42% (v/v), 28.89% (w/w)
Odor threshold : Not available.
Evaporation rate : 21 (butyl acetate = 1)
Octanol/water partition coefficient : Not available.
% Solid. (w/w) : 71.11

10 . Stability and reactivity

Stability : Stable under recommended storage and handling conditions (see section 7).
Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Materials to avoid : Reactive or incompatible with the following materials:,water,acids,oxidizing materials,strong alkalis
Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Stoddart solvent	LD50 Oral	Rat	>5 g/kg	-
titanium dioxide	LD50 Oral	Rat	>10 g/kg	-
kaolin	LD50 Oral	Rat	>5000 mg/kg	-
solvent naphtha (petroleum), light arom.	LD50 Oral	Rat	8400 mg/kg	-
	LD50 Dermal	Rabbit	3.48 g/kg	-
xylene	LD50 Oral	Rat	4.3 g/kg	-
	LD50 Dermal	Rabbit	>1.7 g/kg	-
	LC50 Inhalation Vapor	Rat	5000 ppm	4 hours
2-butanone oxime	LD50 Oral	Rat	930 mg/kg	-
	LD50 Dermal	Rabbit	200 uL/kg	-
ethylbenzene	LD50 Oral	Rat	3.5 g/kg	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LC50 Inhalation Vapor	Rat	4000 ppm	4 hours
1,2,4-trimethylbenzene	LD50 Oral	Rat	5 g/kg	-
	LC50 Inhalation	Rat	18000 mg/m3	4 hours
2-(2-methoxyethoxy)ethanol	LD50 Oral	Rat	4 mL/kg	-
	LD50 Dermal	Rabbit	0.65 g/kg	-
2-ethylhexanoic acid	LD50 Oral	Rat	3 g/kg	-
	LD50 Dermal	Rabbit	1.26 g/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.
Defatting irritant? : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

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11 . Toxicological information

Target organs : Contains material which causes damage to the following organs: lungs, brain, eyes, central nervous system (CNS).
Contains material which may cause damage to the following organs: blood, kidneys, liver, gastrointestinal tract, upper respiratory tract, skin, stomach.

Carcinogenicity

Conclusion/Summary : Not available.

Carcinogenicity : Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
titanium dioxide	A4	2B	-	-	-	-
kaolin	A4	-	-	-	-	-
xylene	A4	3	-	-	-	-
zinc oxide	A4	-	-	-	-	-
ethylbenzene	A3	2B	-	-	-	-
neodecanoic acid, cobalt salt	-	2B	-	-	-	-
cobalt bis(2-ethylhexanoate)	-	2B	-	-	-	-

Mutagenicity

Conclusion/Summary : Not available.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity

Conclusion/Summary : Not available.

Teratogenicity : Contains material which may cause birth defects, based on animal data.

Reproductive toxicity

Conclusion/Summary : Not available.

Developmental effects : Contains material which may cause developmental abnormalities, based on animal data.

Fertility effects : No known significant effects or critical hazards.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
titanium dioxide	Acute LC50 5.5 ppm Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 1 ppm Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
xylene	Acute LC50 3300 to 4093 ug/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours
zinc oxide	Acute LC50 1.1 to 2.5 ppm Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours
	Acute LC50 98 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
2-butanone oxime	Acute LC50 843000 to 914000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
ethylbenzene	Acute LC50 4200 ug/L Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours
	Acute LC50 5100 to 5700 ug/L Marine water	Fish - Atlantic silverside - Menidia menidia	96 hours

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12 . Ecological information

	Acute EC50 2930 to 4400 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 3300 ug/L Marine water	Fish - Atlantic silverside - Menidia menidia	96 hours
1,2,4-trimethylbenzene	Acute LC50 7720 to 8280 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
2-(2-methoxyethoxy)ethanol	Acute LC50 7500000 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus	96 hours

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14 . Transport information

Regulation	UN number	Proper shipping name	Classes	PG*	Additional information
UN	1263	Paint	3	III	-
IMDG	1263	Paint	3	III	-
DOT	1263	Paint	3	III	**Remarks** USA Only: Can be reclassified as Combustible Liquid. Non-Bulk highway shipments (Less than or Equal to 450Liters) can be shipped as non-regulated.

PG* : Packing group

Reportable quantity RQ : CERCLA: Hazardous substances.: xylene: 100 lbs. (45.4 kg); zinc oxide;

15 . Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.
Australia inventory (AICS) : At least one component is not listed.
Canada inventory : At least one component is not listed.
China inventory (IECSC) : Not determined.
Europe inventory : Not determined.
Japan inventory (ENCS) : At least one component is not listed.
Korea inventory (KECI) : At least one component is not listed.
New Zealand : Not determined.
Philippines inventory (PICCS) : At least one component is not listed.

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15 . Regulatory information

United States

U.S. Federal regulations : TSCA 12(b) annual export notification: No products were found.

TSCA 12(b) one-time export: No products were found.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: xylene; Stoddart solvent; kaolin; Limestone; zinc oxide; titanium dioxide
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: xylene: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; Stoddart solvent: Fire hazard, Immediate (acute) health hazard; kaolin: Delayed (chronic) health hazard; Limestone: Immediate (acute) health hazard; zinc oxide: Immediate (acute) health hazard, Delayed (chronic) health hazard; titanium dioxide: Immediate (acute) health hazard

CERCLA: Hazardous substances.: xylene: 100 lbs. (45.4 kg); zinc oxide;

SARA 313
Form R - Reporting requirements :

Product name	CAS number	Concentration
xylene	1330-20-7	0.5 - 1.5
zinc oxide	1314-13-2	0.5 - 1.5
ethylbenzene	100-41-4	0.1 - 1
neodecanoic acid, cobalt salt	27253-31-2	0.1 - 1
cobalt bis(2-ethylhexanoate)	136-52-7	0.1 - 1

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Canada

WHMIS (Canada) : Class B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

Mexico

Classification

Flammability : 2 **Health** : 2 **Reactivity** : 0

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 2 * **Flammability** : 2 **Physical hazards** : 0
(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 2 **Flammability** : 2 **Instability** : 0

Date of previous issue : **6/30/2009.**

Organization that prepared the MSDS : EHS

Indicates information that has changed from previously issued version.

Disclaimer

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16 . Other information

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

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Material Safety Data Sheet

Date of issue 5 April 2009
Version 21

1 . Product and company identification

Product name : *INT S/G WHITE & PASTEL
Code : 7-844
Supplier : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272
Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)
Technical Phone Number : (412) 492-5200 (ALLISON PARK, PA) 8:00 a.m. - 5:00 p.m. EST

2 . Hazards identification

Emergency overview : DANGER!

COMBUSTIBLE LIQUID AND VAPOR. CAUSES RESPIRATORY TRACT IRRITATION. MAY BE HARMFUL IF INHALED OR SWALLOWED. SANDING AND GRINDING DUSTS MAY BE HARMFUL IF INHALED. ASPIRATION HAZARD. CAN ENTER LUNGS AND CAUSE DAMAGE. MAY CAUSE EYE IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER.

Keep away from heat, sparks and flame. Do not swallow. Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled. Irritating to respiratory system. Can irritate eyes, nose, mouth and throat.

Ingestion : May be harmful if swallowed. Aspiration hazard if swallowed. Can enter lungs and cause damage.

Skin : May cause skin dryness and irritation.

Eyes : Moderately irritating to eyes.

Over-exposure signs/symptoms

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone. This product contains crystalline silica which can cause lung cancer or silicosis. The risk of cancer depends on the duration and level of exposure to dust from sanding surfaces or mist from spray applications.

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

See toxicological information (section 11)

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3 . Composition/information on ingredients

Name	CAS number	%
Limestone	1317-65-3	10 - 30
naphtha (petroleum), hydrotreated heavy	64742-48-9	10 - 30
titanium dioxide	13463-67-7	10 - 30
naphtha (petroleum), heavy alkylate	64741-65-7	1 - 5
Silicic acid	1343-98-2	0.5 - 1.5
silica, crystalline - quartz	14808-60-7	0.1 - 1
1,2,4-trimethylbenzene	95-63-6	0.1 - 1
2-butanone oxime	96-29-7	0.1 - 1
2-ethylhexanoic acid	149-57-5	0.1 - 1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do not use solvents or thinners.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.

Extinguishing media

Suitable : Use dry chemical, CO_2, water spray (fog) or foam.

Not suitable : Do not use water jet.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Hazardous combustion products : Decomposition products may include the following materials:
carbon oxides
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

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6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Use spark-proof tools and explosion-proof equipment. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling : Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite. To avoid the risks of fires, all contaminated materials should be placed in a metal container filled with water and sealed. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside. Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Do not swallow. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. Vapors are heavier than air and may spread along floors. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Storage : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store above the following temperature: 120F / 49C.

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8 . Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
Limestone	TWA STEL	Not established Not established	5 mg/m³ R 15 mg/m³ TD Not established	10 mg/m³ TD Not established	10 mg/m³ 20 mg/m³	Not established Not established
titanium dioxide	TWA STEL	10 mg/m³ Not established	15 mg/m³ TD Not established	10 mg/m³ TD Not established	10 mg/m³ (as Ti) 20 mg/m³ (as Ti)	Not established Not established
silica, crystalline - quartz	TWA	0.025 mg/m³ R	10 mg/m³ R Z 30 mg/m³ TD Z 250 mppcf R Z	Not established	0.1 mg/m³	Not established
1,2,4-trimethylbenzene	TWA STEL	25 ppm Not established	Not established Not established	25 ppm Not established	25 ppm 35 ppm	Not established Not established
2-butanone oxime	TWA STEL	Not established Not established	Not established Not established	Not established Not established	Not established Not established	3 ppm 10 ppm
2-ethylhexanoic acid	TWA	5 mg/m³	Not established	5 mg/m³	Not established	Not established

Key to abbreviations

A	= Acceptable Maximum Peak	S	= Potential skin absorption
ACGIH	= American Conference of Governmental Industrial Hygienists.	SR	= Respiratory sensitization
C	= Ceiling Limit	SS	= Skin sensitization
F	= Fume	TD	= Total dust
IPEL	= Internal Permissible Exposure Limit	TLV	= Threshold Limit Value
OSHA	= Occupational Safety and Health Administration.	TWA	= Time Weighted Average
R	= Respirable	Z	= OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

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8 . Exposure controls/personal protection

Eyes : Safety glasses with side shields.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Gloves : For prolonged or repeated handling, use the following type of gloves:

Recommended: nitrile rubber, foil, fluor rubber

Respiratory : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state : Liquid.

Flash point : Closed cup: 48.89°C (120°F)

Explosion limits : Lower: 1.1%

Color : Not available.

Odor : Not available.

pH : Not available.

Boiling/condensation point : >37.78°C (>100°F)

Melting/freezing point : Not available.

Specific gravity : 1.36

Density (lbs / gal) : 11.35

Vapor pressure : 0.13 kPa (1 mm Hg)

Vapor density : Not available.

Volatility : 44% (v/v), 24.51% (w/w)

Odor threshold : Not available.

Evaporation rate : 4 (Butyl acetate. = 1)

Octanol/water partition coefficient : Not available.

% Solid. (w/w) : 75.49

10 . Stability and reactivity

Stability : Stable under recommended storage and handling conditions (see section 7).

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Materials to avoid : Reactive or incompatible with the following materials:,acids,oxidizing materials,strong alkalis

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10 . Stability and reactivity

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
titanium dioxide	LD50 Oral	Rat	>10 g/kg	-
1,2,4-trimethylbenzene	LD50 Oral	Rat	5 gm/kg	-
	LC50 Inhalation	Rat	18000 mg/m3	4 hours
2-butanone oxime	LD50 Oral	Rat	930 mg/kg	-
	LD50 Dermal	Rabbit	200 uL/kg	-
2-ethylhexanoic acid	LD50 Oral	Rat	3 g/kg	-
	LD50 Dermal	Rabbit	1.26 g/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Defatting irritant? : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Target organs : Contains material which causes damage to the following organs: brain, central nervous system (CNS).
Contains material which may cause damage to the following organs: lungs, upper respiratory tract, skin, eye, lens or cornea.

Carcinogenicity

Conclusion/Summary : Not available.

Carcinogenicity : Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
titanium dioxide	A4	2B	-	-	-	-
silica, crystalline - quartz	A2	1	-	+	Proven.	-

Mutagenicity

Conclusion/Summary : Not available.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity

Conclusion/Summary : Not available.

Teratogenicity : No known significant effects or critical hazards.

Reproductive toxicity

Conclusion/Summary : Not available.

Developmental effects : Contains material which may cause developmental abnormalities, based on animal data.

Fertility effects : No known significant effects or critical hazards.

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12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
titanium dioxide	Acute LC50 5.5 ppm Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 1 ppm Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
1,2,4-trimethylbenzene	Acute LC50 7720 to 8280 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
2-butanone oxime	Acute LC50 843000 to 914000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14 . Transport information

Regulation	UN number	Proper shipping name	Classes	PG*	Additional information
UN	1263	Paint	3	III	-
IMDG	1263	Paint	3	III	-
DOT	1263	Paint	3	III	**Remarks** USA Only: Can be reclassified as Combustible Liquid. Non-Bulk highway shipments (Less than or Equal to 450Liters) can be shipped as non-regulated.

PG* : Packing group

Reportable quantity RQ : CERCLA: Hazardous substances.: No products were found.

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15 . Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.
Australia inventory (AICS) : At least one component is not listed.
Canada inventory : All components are listed or exempted.
China inventory (IECSC) : All components are listed or exempted.
Europe inventory : All components are listed or exempted.
Japan inventory (ENCS) : At least one component is not listed.
Korea inventory (KECI) : All components are listed or exempted.
New Zealand : Not determined.
Philippines inventory (PICCS) : At least one component is not listed.

United States

U.S. Federal regulations : TSCA 12(b) annual export notification: No products were found.
TSCA 12(b) one-time export: No products were found.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Limestone; titanium dioxide
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Limestone: Immediate (acute) health hazard; titanium dioxide: Immediate (acute) health hazard
CERCLA: Hazardous substances.: No products were found.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Canada

WHMIS (Canada) : Class B-6: Reactive flammable material Class B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

Mexico

Classification

Flammability : 2 **Health** : 2 **Reactivity** : 0

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 2 * **Flammability** : 2 **Physical hazards** : 0
(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 2 **Flammability** : 2 **Instability** : 0

Date of previous issue : **No previous validation.**

Organization that prepared the MSDS : EHS

Indicates information that has changed from previously issued version.

Disclaimer

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16 . Other information

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

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Material Safety Data Sheet

Date of issue 8 June 2009
Version 11

1 . Product and company identification

Product name : WHITE ZONE MARKING PAINT

Code : 11-23

Supplier : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)

Technical Phone Number : 1-800-441-9695 (8:00 am to 5:00 pm EST)

2 . Hazards identification

Emergency overview : WARNING!

CAUSES RESPIRATORY TRACT AND EYE IRRITATION. MAY BE HARMFUL IF INHALED OR SWALLOWED. SANDING AND GRINDING DUSTS MAY BE HARMFUL IF INHALED. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER.

Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled. Irritating to respiratory system. Can irritate eyes, nose, mouth and throat.

Ingestion : May be harmful if swallowed.

Skin : No known significant effects or critical hazards.

Eyes : Irritating to eyes.

Over-exposure signs/symptoms

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Ingestion : No specific data.

Skin : No specific data.

Eyes : Adverse symptoms may include the following:
pain or irritation
watering
redness

This product contains crystalline silica which can cause lung cancer or silicosis. The risk of cancer depends on the duration and level of exposure to dust from sanding surfaces or mist from spray applications.

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See toxicological information (section 11)

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3 . Composition/information on ingredients

Name	CAS number	%
Limestone	1317-65-3	10 - 30
titanium dioxide	13463-67-7	5 - 10
Nepheline syenite	37244-96-5	5 - 10
kaolin	1332-58-7	1 - 5
Quartz (SiO2)	14808-60-7	0.1 - 1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do not use solvents or thinners.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous combustion products : Decomposition products may include the following materials:
carbon oxides
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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6 . Accidental release measures

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Do not swallow. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store below the following temperature: 32F / 0C.

8 . Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
Limestone	TWA STEL	Not established Not established	5 mg/m³ R 15 mg/m³ TD Not established	10 mg/m³ TD Not established	10 mg/m³ 20 mg/m³	Not established Not established
titanium dioxide	TWA STEL	10 mg/m³ Not established	15 mg/m³ TD Not established	10 mg/m³ TD Not established	10 mg/m³ (as Ti) 20 mg/m³ (as Ti)	Not established Not established
Nepheline syenite	TWA	10 MG/M3 TD 3 MG/M3 R	15 mg/m3 TD 5 mg/m3 R 15 mg/m3	10 mg/m³ TD	Not established	Not established
kaolin	TWA STEL	2 mg/m³ R Not established	5 mg/m³ R 15 mg/m³ TD Not established	2 mg/m³ R TD Not established	10 mg/m³ 20 mg/m³	Not established Not established
Quartz (SiO2)	TWA	0.025 mg/m³ R	10 mg/m³ R Z 30 mg/m³ TD Z	Not established	0.1 mg/m³	Not established

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8 . Exposure controls/personal protection

			250 mppcf R Z			

Key to abbreviations

A	=	Acceptable Maximum Peak	S	=	Potential skin absorption
ACGIH	=	American Conference of Governmental Industrial Hygienists.	SR	=	Respiratory sensitization
C	=	Ceiling Limit	SS	=	Skin sensitization
F	=	Fume	TD	=	Total dust
IPEL	=	Internal Permissible Exposure Limit	TLV	=	Threshold Limit Value
OSHA	=	Occupational Safety and Health Administration.	TWA	=	Time Weighted Average
R	=	Respirable	Z	=	OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes : Safety glasses with side shields.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Respiratory : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state : Liquid.

Flash point : Closed cup: 93.33°C (200°F)

Color : Not available.

Odor : Not available.

pH : Not available.

Boiling/condensation point : >37.78°C (>100°F)

Melting/freezing point : Not available.

Specific gravity : 1.39

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9 . Physical and chemical properties

Density (lbs / gal) : 11.6
Vapor pressure : 2.3 kPa (17.5 mm Hg)
Vapor density : Not available.
Volatility : 68% (v/v), 48.86% (w/w)
Odor threshold : Not available.
Evaporation rate : 35 (butyl acetate = 1)
Octanol/water partition coefficient : Not available.
% Solid. (w/w) : 51.14

10 . Stability and reactivity

Stability : Stable under recommended storage and handling conditions (see section 7).
Conditions to avoid : No specific data.
Materials to avoid : Reactive or incompatible with the following materials:,water,acids
Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
titanium dioxide	LD50 Oral	Rat	>10 g/kg	-
kaolin	LD50 Oral	Rat	>5000 mg/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.
Target organs : Contains material which causes damage to the following organs: lungs, eyes. Contains material which may cause damage to the following organs: upper respiratory tract, skin, stomach.

Carcinogenicity

Conclusion/Summary : Not available.
Carcinogenicity : Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
titanium dioxide	A4	2B	-	-	-	-
kaolin	A4	-	-	-	-	-
Quartz (SiO2)	A2	1	-	+	Proven.	-

Mutagenicity

Conclusion/Summary : Not available.
Mutagenicity : No known significant effects or critical hazards.

Teratogenicity

Conclusion/Summary : Not available.
Teratogenicity : No known significant effects or critical hazards.

Reproductive toxicity

Conclusion/Summary : Not available.

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11 . Toxicological information

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
titanium dioxide	Acute LC50 5.5 ppm Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 1 ppm Fresh water	Daphnia - Water flea - Daphnia magna	48 hours

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14 . Transport information

Regulation	UN number	Proper shipping name	Classes	PG*	Additional information
UN	None.	Not regulated.	None.	-	-
IMDG	None.	Not regulated.	None.	-	-
DOT	None.	Not regulated.	Not available.	-	-

PG* : Packing group

Reportable quantity RQ : CERCLA: Hazardous substances.: No products were found.

15 . Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.

Australia inventory (AICS) : At least one component is not listed.

Canada inventory : All components are listed or exempted.

China inventory (IECSC) : All components are listed or exempted.

Europe inventory : All components are listed or exempted.

Japan inventory (ENCS) : At least one component is not listed.

Korea inventory (KECI) : All components are listed or exempted.

New Zealand : Not determined.

Philippines inventory (PICCS) : All components are listed or exempted.

United States

U.S. Federal regulations : TSCA 12(b) annual export notification: No products were found.
TSCA 12(b) one-time export: No products were found.

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15 . Regulatory information

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: kaolin; Limestone; titanium dioxide
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: kaolin: Delayed (chronic) health hazard; Limestone: Immediate (acute) health hazard; titanium dioxide: Immediate (acute) health hazard

CERCLA: Hazardous substances.: No products were found.

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Canada

WHMIS (Canada) : Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

Mexico

Classification

Flammability : 2 **Health** : 2 **Reactivity** : 0

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 2 * **Flammability** : 2 **Physical hazards** : 0

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 2 **Flammability** : 2 **Instability** : 0

Date of previous issue : **No previous validation.**

Organization that prepared the MSDS : EHS

◤ **Indicates information that has changed from previously issued version.**

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

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Material Safety Data Sheet

Date of issue 13 May 2009
Version 10.02

1 . Product and company identification

Product name : HANDICAP BLUE ZONE MARKING PAINT

Code : 11-25

Supplier : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)

Technical Phone Number : 1-800-441-9695 (8:00 am to 5:00 pm EST)

2 . Hazards identification

Emergency overview : WARNING!

CAUSES RESPIRATORY TRACT AND EYE IRRITATION. MAY BE HARMFUL IF INHALED OR SWALLOWED. SANDING AND GRINDING DUSTS MAY BE HARMFUL IF INHALED. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER.

Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled. Irritating to respiratory system. Can irritate eyes, nose, mouth and throat.

Ingestion : May be harmful if swallowed.

Skin : May cause skin dryness and irritation.

Eyes : Irritating to eyes.

Over-exposure signs/symptoms

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Ingestion : No specific data.

Skin : Adverse symptoms may include the following:
irritation
dryness
cracking

Eyes : Adverse symptoms may include the following:
pain or irritation
watering
redness

This product contains crystalline silica which can cause lung cancer or silicosis. The risk of cancer depends on the duration and level of exposure to dust from sanding surfaces or mist from spray applications.

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

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2 . Hazards identification

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See toxicological information (section 11)

3 . Composition/information on ingredients

Name	CAS number	%
Limestone	1317-65-3	10 - 30
Nepheline syenite	37244-96-5	5 - 10
Kaolin	1332-58-7	1 - 5
ethanediol	107-21-1	1 - 5
titanium dioxide	13463-67-7	0.5 - 1.5
methanol	67-56-1	0.1 - 1
silica, crystalline - quartz	14808-60-7	0.1 - 1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do not use solvents or thinners.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous combustion products : Decomposition products may include the following materials:
carbon oxides
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

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6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Do not swallow. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store below the following temperature: 32F / 0C.

8 . Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
Limestone	TWA STEL	Not established Not established	5 mg/m³ R 15 mg/m³ TD Not established	10 mg/m³ TD Not established	10 mg/m³ 20 mg/m³	Not established Not established
Nepheline syenite	TWA	10 MG/M3 TD 3 MG/M3 R	15 mg/m3 TD 5 mg/m3 R 15 mg/m3	10 mg/m³ TD	Not established	Not established

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8 . Exposure controls/personal protection

Kaolin	TWA STEL	2 mg/m³ R Not established	5 mg/m³ R 15 mg/m³ TD Not established	2 mg/m³ R TD Not established	10 mg/m³ 20 mg/m³	Not established Not established
ethanediol	STEL	100 mg/m³ C	Not established	100 mg/m³ C	100 mg/m³ C	Not established
titanium dioxide	TWA STEL	10 mg/m³ Not established	15 mg/m³ TD Not established	10 mg/m³ TD Not established	10 mg/m³ (as Ti) 20 mg/m³ (as Ti)	Not established Not established
methanol	TWA STEL	200 ppm 250 ppm	200 ppm Not established	200 ppm 250 ppm	200 ppm 250 ppm	Not established Not established
silica, crystalline - quartz	TWA	0.025 mg/m³ R	10 mg/m³ R Z 30 mg/m³ TD Z 250 mppcf R Z	Not established	0.1 mg/m³	Not established

Key to abbreviations

A	=	Acceptable Maximum Peak	S	=	Potential skin absorption
ACGIH	=	American Conference of Governmental Industrial Hygienists.	SR	=	Respiratory sensitization
C	=	Ceiling Limit	SS	=	Skin sensitization
F	=	Fume	TD	=	Total dust
IPEL	=	Internal Permissible Exposure Limit	TLV	=	Threshold Limit Value
OSHA	=	Occupational Safety and Health Administration.	TWA	=	Time Weighted Average
R	=	Respirable	Z	=	OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes : Safety glasses with side shields.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

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8 . Exposure controls/personal protection

Respiratory : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state : Liquid.
Flash point : Closed cup: 93.33°C (200°F)
Explosion limits : Lower: 9.9%
Color : Not available.
Odor : Not available.
pH : Not available.
Boiling/condensation point : >37.78°C (>100°F)
Melting/freezing point : Not available.
Specific gravity : 1.32
Density (lbs / gal) : 11.02
Vapor pressure : 2.4 kPa (18.1 mm Hg)
Vapor density : Not available.
Volatility : 70% (v/v), 52.88% (w/w)
Odor threshold : Not available.
Evaporation rate : 36 (Butyl acetate. = 1)
Octanol/water partition coefficient : Not available.
% Solid. (w/w) : 47.12

10 . Stability and reactivity

Stability : Stable under recommended storage and handling conditions (see section 7).
Conditions to avoid : No specific data.
Materials to avoid : Reactive or incompatible with the following materials:,water,acids
Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

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11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Kaolin	LD50 Oral	Rat	>5000 mg/kg	-
ethanediol	LD50 Oral	Rat	4700 mg/kg	-
	LD50 Dermal	Rabbit	9.53 g/kg	-
titanium dioxide	LD50 Oral	Rat	>10 g/kg	-
methanol	LD50 Oral	Rat	5600 mg/kg	-
	LD50 Dermal	Rabbit	15800 mg/kg	-
	LC50 Inhalation	Rat	64000 ppm	4 hours

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Defatting irritant? : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Target organs : Contains material which causes damage to the following organs: kidneys, lungs, upper respiratory tract, skin, eye, lens or cornea, stomach.
Contains material which may cause damage to the following organs: central nervous system (CNS).

Carcinogenicity

Conclusion/Summary : Not available.

Carcinogenicity : Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Kaolin	A4	-	-	-	-	-
ethanediol	A4	-	-	-	-	-
titanium dioxide	A4	2B	-	-	-	-
silica, crystalline - quartz	A2	1	-	+	Proven.	-

Mutagenicity

Conclusion/Summary : Not available.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity

Conclusion/Summary : Not available.

Teratogenicity : Contains material which may cause birth defects, based on animal data.

Reproductive toxicity

Conclusion/Summary : Not available.

Developmental effects : Contains material which may cause developmental abnormalities, based on animal data.

Fertility effects : No known significant effects or critical hazards.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure

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12 . Ecological information

ethanediol	Acute LC50 8050000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
	Acute LC50 >10000000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 6090000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
titanium dioxide	Acute LC50 5.5 ppm Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 1 ppm Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
methanol	Acute LC50 >100000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
	Acute LC50 3289 to 4395 mg/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14 . Transport information

Regulation	UN number	Proper shipping name	Classes	PG*	Additional information
UN	None.	Not regulated.	None.	-	-
IMDG	None.	Not regulated.	None.	-	-
DOT	None.	Not regulated.	Not available.	-	-

PG* : Packing group

Reportable quantity RQ : CERCLA: Hazardous substances.: ethanediol: 5000 lbs. (2270 kg);

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15 . Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.
Australia inventory (AICS) : At least one component is not listed.
Canada inventory : All components are listed or exempted.
China inventory (IECSC) : All components are listed or exempted.
Europe inventory : All components are listed or exempted.
Japan inventory (ENCS) : At least one component is not listed.
Korea inventory (KECI) : All components are listed or exempted.
New Zealand : Not determined.
Philippines inventory (PICCS) : All components are listed or exempted.

United States

U.S. Federal regulations : TSCA 12(b) annual export notification: No products were found.
TSCA 12(b) one-time export: No products were found.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Kaolin; Limestone; ethanediol; titanium dioxide
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Kaolin: Delayed (chronic) health hazard; Limestone: Immediate (acute) health hazard; ethanediol: Immediate (acute) health hazard, Delayed (chronic) health hazard; titanium dioxide: Immediate (acute) health hazard
CERCLA: Hazardous substances.: ethanediol: 5000 lbs. (2270 kg);

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting requirements :	ethanediol	107-21-1	1 - 5

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Canada

WHMIS (Canada) : Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

Mexico

Classification

Flammability : 2 **Health** : 2 **Reactivity** : 0

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 2 * **Flammability** : 2 **Physical hazards** : 0
(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 2 **Flammability** : 2 **Instability** : 0

Powered by ATRION

16 . Other information

Date of previous issue : **No previous validation.**

Organization that prepared the MSDS : EHS

◤ **Indicates information that has changed from previously issued version.**

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

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MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY INFORMATION

PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

EMERGENCY PHONE NUMBERS (24 hours/day): **(412) 434-4515 (U.S.)**
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)
0532-83889090 (China)

TECHNICAL INFORMATION: 1-800-441-9695 (8:00 am to 5:00 pm EST)

PRODUCT SAFETY/MSDS INFORMATION: (412) 492-5555 7:00 a.m. - 4:30 p.m. EST

Product ID: 11-44 (0822-T0)
PRODUCT NAME: TRAFFIC PAINT YELLOW
SYNONYMS: None
ISSUE DATE: 09/28/2006
EDITION NO.: 2
CHEMICAL FAMILY: ACRYLIC

EMERGENCY OVERVIEW:
CAUSES EYE IRRITATION. MAY CAUSE SLIGHT SKIN IRRITATION. VAPOR AND/OR SPRAY MIST MAY BE HARMFUL IF INHALED.HARMFUL IF SWALLOWED. This product is not expected to present any unusual hazards under fire or spill conditions. Read entire MSDS before use.

SECTION 2 - COMPOSITION INFORMATION

The following ingredient(s) marked with an "x" are considered hazardous under applicable U.S. OSHA and/or Canadian WHMIS regulations. If no ingredients are listed, then there are no U.S. OSHA and/or Canadian WHMIS hazardous ingredients in this product.

Material/ CAS Number	Percent	Hazardous
CALCIUM CARBONATE 1317-65-3	15 - 40	X
TALC 14807-96-6	3 - 7	X
TITANIUM DIOXIDE 13463-67-7	1 - 5	X

SECTION 3 - HAZARDS IDENTIFICATION

ACUTE OVEREXPOSURE EFFECTS

EYE CONTACT:
Causes eye irritation. Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact.

SKIN CONTACT:
May cause slight skin irritation. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

SKIN ABSORPTION:
Skin absorption not expected to occur.

INHALATION:
Vapor and/or spray mist may be harmful if inhaled.

INGESTION:
Harmful if swallowed.

SIGNS & SYMPTOMS OF OVEREXPOSURE:
Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

CHRONIC OVEREXPOSURE EFFECTS
Avoid long-term and repeated contact.
This product contains talc. In a lifetime inhalation study female rats exposed to an elevated respirable concentration (9 times the Permissible Exposure Limit) of cosmetic grade talc developed lung cancer.
The effects of long-term, low level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the prevention of all contact with this material to avoid any effects from repetitive acute exposures. See Section 11, of this MSDS for a detailed list of chronic health effects information available on individual ingredients in this product.

SECTION 4 - FIRST AID MEASURES

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available.

EYE CONTACT:
Remove contact lens and pour a gentle stream of warm water through the affected eye for at least 15 minutes. If irritation persists, contact a poison control center, emergency room, or physician as further treatment may be necessary.

SKIN CONTACT:
Run a gentle stream of water over the affected area for 15 minutes. A mild soap may be used if available. If any symptoms persist, contact a poison control center, emergency room, or physician as further treatment may be necessary.

INHALATION:
Remove from area to fresh air. If symptomatic, contact a poison control center, emergency room or physician for treatment information.

INGESTION:
Gently wipe or rinse the inside of the mouth with water. Sips of water may be given. Never give anything by mouth to an unconscious person. Contact a poison control center, emergency room or physician right away as further treatment may be necessary.

SECTION 5 - FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES
FLASHPOINT: Not Applicable.
FLASHPOINT TEST METHOD:
Pensky-Martens Closed Cup
UEL: Not Available.
LEL: Not Available.
AUTOIGNITION TEMPERATURE:
Not Available.

EXTINGUISHING MEDIA:
Use extinguishers appropriate for surrounding fire.

PROTECTION OF FIREFIGHTERS:
Water spray may be ineffective. Water spray may be used to cool closed containers that are exposed to extreme heat. If water is used, fog nozzles are preferable. Firefighters should wear self-contained breathing apparatus and full protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
Closed containers may explode or burst (due to the build-up of steam pressure) when exposed to extreme heat. May produce hazardous decomposition products when exposed to extreme heat. Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

SECTION 6 - ACCIDENTAL RELEASE MEASURE

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN DURING HANDLING AND STORAGE:
If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

STORAGE:
Protect from freezing.

SECTION 8 - EXPOSURE CONTROLS & PERSONAL PROTECTION

ENGINEERING CONTROLS:
Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 8 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

PERSONAL PROTECTIVE EQUIPMENT

EYES:
Wear safety glasses with side shields.

SKIN/GLOVES:
Wear protective clothing. Gloves should be constructed of: neoprene rubber or nitrile rubber. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment. Clean contaminated clothing and shoes.

RESPIRATOR:
Where ventilation is inadequate, use a NIOSH- approved air purifying respirator with the appropriate chemical cartridges or positive- pressure, air-supplied respirator. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used. Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

GENERAL HYGIENE - ESTABLISHED EXPOSURE LIMITS
If Threshold Limit Values (TLVs) have been established by ACGIH, OSHA, Ontario or PPG, they will be listed below. These limits are intended for use in the practice of industrial hygiene as guidelines or recommendations in the control of potential workplace health hazards. These limits are not a relative index of toxicity and should not be used by anyone without industrial hygiene training.

Material/ CAS Number	Percent	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
CALCIUM CARBONATE 1317-65-3	15 - 40	Not established	Not established	R- 5 mg/m^3	Not established
TALC 14807-96-6	3 - 7	R- 2 MG/m^3	Not established	R- 2 mg/m^3	Not established
TITANIUM DIOXIDE 13463-67-7	1 - 5	10 mg/m^3	Not established	10 mg/m^3	Not established

Material/ CAS Number	Percent	Ontario TWA	Ontario STEL	PPG IPEL	PPG STEL
CALCIUM CARBONATE 1317-65-3	15 - 40	10 MG/m^3	Not established	Not established	Not established
TALC 14807-96-6	3 - 7	R- 2 MG/m^3	Not established	Not established	Not established
TITANIUM DIOXIDE 13463-67-7	1 - 5	10 MG/m^3	Not established	Not established	Not established

Key: ACGIH=American Conference of Governmental Industrial Hygienists; OSHA=Occupational Safety and Health Administration; TLV=Threshold Limit Value; TWA=Time Weighted Average; PEL=Permissible Exposure Limit (1989 Vacated values); IPEL=Internal Permissible Exposure Limit; Ceiling=TLV or PEL Ceiling Limit; STEL=TLV or PEL Short-Term Exposure Limit; Skin= Skin Absorption Designation. [C- Ceiling Limit; S-Potential Skin Absorption; R-Respirable Dust]
Additional Information Not applicable.

SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES

(FORMULA VALUES, NOT SALES SPECIFICATIONS)

SPECIFIC GRAVITY:	1.500
PHYSICAL STATE:	Liquid
Percent Solids:	61.00
Percent Volatile by Volume:	57.800
pH:	Not available.
ODOR THRESHOLD:	Not available.
Vapour Pressure:	17.5 mmHg
ODOR/APPEARANCE:	Viscous liquid with an odor characteristic of the chemical family and any solvents listed in Section 2.
VAPOR DENSITY:	HEAVIER THAN AIR
Evaporation Rate:	32
BOILING POINT OR RANGE:	212- 215Degrees F
Freezing Point or Range:	Not Applicable.
Melting Point or Range(°C):	Not Applicable.
Partition coefficient (n-octanol/water):	Not Applicable.
WEIGHT PER GALLON:	12.50 (U.S.) / 15.0 (IMPERIAL)

SECTION 10 - STABILITY AND REACTIVITY

STABILITY:
This product is normally stable and will not undergo hazardous reactions.

CONDITIONS TO AVOID:
None Known.

INCOMPATIBLE MATERIALS:
Avoid contact with strong alkalies, strong mineral acids, or strong oxidizing agents.

HAZARDOUS POLYMERIZATION:
None Known.

HAZARDOUS DECOMPOSITION PRODUCTS:
- Carbon monoxide - Carbon dioxide - Oxides of nitrogen - Lower molecular weight polymer fractions

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Material/ CAS Number	Percent	ORAL LD50 (g/kg)	DERMAL LD50 (g/kg)	INHALATION LC50 (mg/l)
TITANIUM DIOXIDE 13463-67-7	1 - 5	10.00 g/kg	Not Available	Not Available

CHRONIC TOXICITY

Ingredient Target Organ/Chronic Effects:
- Carcinogen - Lung

Mutagenicity Toxicity:
This has not been tested for this product.

Reproductive Toxicity:
This has not been tested for this product.

SUPPLEMENTAL HEALTH INFORMATION:

Material/ CAS Number	Percent	Ingredient Specific Animal Data:
TITANIUM DIOXIDE 13463-67-7	1 - 5	This product contains titanium dioxide. Animals inhaling massive quantities of titanium dioxide dust in a long-term study developed lung tumors. Studies with humans involved in manufacture of this pigment indicate no increased risk of cancer from exposure.

SECTION 12 - ECOLOGICAL INFORMATION

POTENTIAL ENVIRONMENTAL EFFECTS

Ecotoxicity: No Information Available.

ENVIRONMENTAL FATE

Mobility: No information available.
Biodegradation: No information available.
Bioaccumulation: No Information Available.

PHYSICAL/CHEMICAL

Hydrolysis: No information available.
Photolysis: No information available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Provide maximum ventilation, only personnel equipped with proper respiratory and skin and eye protection should be permitted in the area. Take up spilled material with sawdust, vermiculite, or other absorbent material and place in containers for disposal.

Waste material must be disposed of in accordance with federal, state, provincial and local environmental control regulations. Empty containers should be recycled by an appropriately licensed reconditioner/salvager or disposed of through a permitted waste management facility. Additional disposal information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

SECTION 14 - TRANSPORTATION INFORMATION

Proper Shipping Name: Paint- Non-Regulated Goods
NOS Technical Name: None
Hazard Class: None
Subsidiary Class(es): None
UN Number: None
Packing Group: None

USA - RQ Hazardous Substances: None
USA-RQ Hazardous Substance Threshold Ship Weight: None
Marine Pollutant Name: None

SECTION 15 - REGULATORY INFORMATION

INVENTORY STATUS

U.S. TSCA: This product and/or all of its components are listed on the U.S. TSCA Inventory or is otherwise exempt from TSCA Inventory reporting requirements.

FEDERAL REGULATIONS

US Regulations

Material/ CAS Number	Percent	CERCLA HS - RQ (LBS)	SARA EHS- TPQ (LBS)	SARA 313
CALCIUM CARBONATE 1317-65-3	15 - 40	Not Listed	Not Listed	Not Listed
TALC 14807-96-6	3 - 7	Not Listed	Not Listed	Not Listed
TITANIUM DIOXIDE 13463-67-7	1 - 5	Not Listed	Not Listed	Not Listed

SARA 311/312

Health (acute): No
Health (chronic): No
Fire (flammable): No
Pressure: No
Reactivity: No

WHMIS HAZARD CLASS: - Class D, Division 2, Subdivision A

STATE/PROVINCIAL REGULATIONS

Additional Information

Material/ CAS Number	Percent	IARC Group 1(Known Human Carc.)	IARC Group 2A (Probable Carc.)	IARC 2B (Suspected Carc.)	ACGIH Carc.	NTP Known Carc.	OSHA Carc.
TITANIUM DIOXIDE 13463-67-7	1 - 5	N	N	Y	N	N	N

Key: IARC- International Agency on the Research of Cancer; ACGIH- American Conference of Governmental Industrial Hygienists; NTP- National Toxicology Program *Denotes chemical as NTP Known Carcinogen; + Denotes NTP Possible Carcinogen; OSHA- Occupational Safety and Health Administration.

SECTION 16 - OTHER INFORMATION

Hazard Rating Systems
NFPA Rating: 1 10
HMIS Rating: 1 10

Rating System: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe, *=Chronic Effects.

HMIS=Hazardous Materials Identification System; NFPA=National Fire Protection Association;

Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments and conditions of use.

PREPARED BY: Product Safety Department
REASON FOR REVISION: Date. Edition.
Updated MSDS
format.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200), the supplier notification requirements of SARA Title III, Section 313 and other applicable right-to-know regulations.
Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.
11-44 000000 (00427658.001)(10/03/06)
061002, 000, 0822

*** END OF MSDS ***

Material Safety Data Sheet

Date of issue 15 July 2010
Version 8

1 . Product and company identification

Product name : ZONEMARK
Code : 50-300
Supplier : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272
Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)
Technical Phone Number : 1-800-441-9695 (8:00 am to 5:00 pm EST)

2 . Hazards identification

Emergency overview : WARNING!

MAY BE HARMFUL IF INHALED OR SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA.

Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled.
Ingestion : May be harmful if swallowed.
Skin : No known significant effects or critical hazards.
Eyes : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation : No specific data.
Ingestion : No specific data.
Skin : No specific data.
Eyes : No specific data.

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See toxicological information (section 11)

3 . Composition/information on ingredients

Name	CAS number	%
Limestone	1317-65-3	10 - 30
Titanium dioxide	13463-67-7	7 - 13

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous combustion products : Decomposition products may include the following materials:
carbon oxides
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

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7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Do not swallow. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store below the following temperature: 32F / 0C.

8 . Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
Limestone	TWA	Not established	5 mg/m³ R 15 mg/m³ TD	Not established	10 mg/m³	Not established
	STEL	Not established	Not established	Not established	20 mg/m³	Not established
Titanium dioxide	TWA	10 mg/m³	15 mg/m³ TD	10 mg/m³ TD	10 mg/m³ (as Ti)	Not established
	STEL	Not established	Not established	Not established	20 mg/m³ (as Ti)	Not established

Key to abbreviations

A = Acceptable Maximum Peak
ACGIH = American Conference of Governmental Industrial Hygienists.
C = Ceiling Limit
F = Fume
IPEL = Internal Permissible Exposure Limit
OSHA = Occupational Safety and Health Administration.
R = Respirable
Z = OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances
S = Potential skin absorption
SR = Respiratory sensitization
SS = Skin sensitization
STEL = Short term Exposure limit values
TD = Total dust
TLV = Threshold Limit Value
TWA = Time Weighted Average

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes : Safety glasses with side shields.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

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8 . Exposure controls/personal protection

Respiratory : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state : Liquid.
Flash point : Closed cup: >93.33°C (>200°F)
Color : Not available.
Odor : Not available.
pH : Not available.
Boiling/condensation point : >37.78°C (>100°F)
Melting/freezing point : Not available.
Specific gravity : 1.37
Density (lbs / gal) : 11.43
Vapor pressure : 2.3 kPa (17.5 mm Hg)
Vapor density : Not available.
Volatility : 74% (v/v), 53.44% (w/w)
Odor threshold : Not available.
Evaporation rate : 36 (butyl acetate = 1)
Octanol/water partition coefficient : Not available.
% Solid. (w/w) : 46.56

10 . Stability and reactivity

Stability : Stable under recommended storage and handling conditions (see section 7).
Conditions to avoid : No specific data.
Materials to avoid : Reactive or incompatible with the following materials:,acids
Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Titanium dioxide	LD50 Oral	Rat	>10 g/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.
Target organs : Contains material which may cause damage to the following organs: lungs, upper respiratory tract, skin, eyes.

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11 . Toxicological information

Carcinogenicity

Carcinogenicity : Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Titanium dioxide	A4	2B	-	-	-	-

Mutagenicity

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity

Teratogenicity : No known significant effects or critical hazards.

Reproductive toxicity

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Titanium dioxide	Acute LC50 5.5 ppm Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 1 ppm Fresh water	Daphnia - Water flea - Daphnia magna	48 hours

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14 . Transport information

Regulation	UN number	Proper shipping name	Classes	PG*	Additional information
UN	None.	Not regulated.	None.	-	-
IMDG	None.	Not regulated.	None.	-	-
DOT	None.	Not regulated.	None.	-	-

PG* : Packing group

Reportable quantity RQ : CERCLA: Hazardous substances.: No products were found.

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15 . Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.
Australia inventory (AICS) : Not determined.
Canada inventory (DSL) : All components are listed or exempted.
China inventory (IECSC) : All components are listed or exempted.
Europe inventory (REACH) : Please contact your supplier for information on the inventory status of this material.
Japan inventory (ENCS) : At least one component is not listed.
Korea inventory (KECI) : All components are listed or exempted.
New Zealand (NZIoC) : At least one component is not listed.
Philippines inventory (PICCS) : All components are listed or exempted.

United States

U.S. Federal regulations : **TSCA 12(b) annual export notification**: No products were found.
TSCA 12(b) one-time export: No products were found.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Limestone; Titanium dioxide
CERCLA: Hazardous substances.: No products were found.

SARA 311/312 MSDS Distribution - Chemical Inventory - Hazard Identification:

Chemical name	CAS #	Acute	Chronic	Fire	Reactive	Pressure
Limestone	1317-65-3	N	N	N	N	N
Titanium dioxide	13463-67-7	N	Y	N	N	N
	Product as-supplied :	N	Y	N	N	N

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

Canada

WHMIS (Canada) : Class D-2A: Material causing other toxic effects (Very toxic).

Mexico

Classification

Flammability : 1 **Health** : 1 **Reactivity** : 0

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 1 * **Flammability** : 1 **Physical hazards** : 0
(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 1 **Flammability** : 1 **Instability** : 0

Date of previous issue : **4/21/2010.**

Organization that prepared the MSDS : EHS

Indicates information that has changed from previously issued version.

Disclaimer

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16 . Other information

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

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M A T E R I A L S A F E T Y D A T A S H E E T

PPG PITTBULL GLOSS BLACK 55-609

1. Product And Company Identification

Supplier
PPG Architectural Finishes, Inc
One PPG Place
Pittsburgh, PA 15272

Company Contact: Technical Service
Telephone Number: 1-800-441-9695
FAX Number: 1-888-807-5123

Manufacturer
Chase Products Co.
19th and Gardner Road
Broadview, IL 60155 USA

Company Contact: Aludia B. Hernandez
Telephone Number: 708-865-1000
FAX Number: 708-865-0923
E-Mail: sales@chaseproducts.com
Web Site: www.chaseproducts.com

Supplier Emergency Contacts & Phone Number
None Given

Manufacturer Emergency Contacts & Phone Number
Chem-Tel: 1-800-255-3924

Issue Date: 12/17/2001

Product Name: PPG PITTBULL GLOSS BLACK 55-609
Chemical Name: 6-6004
CAS Number: Not Established
MSDS Number: 1271
Product Code: 55-609 (429-1357)
Product/Material Uses - Spray Paint

2. Composition/Information On Ingredients

Ingredient Name	CAS Number		Percent Of Total Weight
2-BUTOXYETHANOL	111-76-2		1 - 5
ACETONE	67-64-1		25 - 30
BUTANE	106-97-8		10 - 15
CARBON BLACK	1333-86-4		1 - 5
LIGHT ALIPHATIC NAPHTHA	8032-32-4		1 - 5
MINERAL SPIRITS	8052-41-3		1 - 5
PROPANE	74-98-6		15 - 20
TOLUENE	108-88-3		15 - 20
V.M. & P. NAPHTHA	64742-89-8		1 - 5
XYLENE (MIXED ISOMERS)	1330-20-7		1 - 5

The ingredients listed on this section are only the hazardous components of the product.

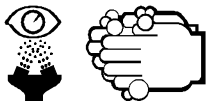
3. Hazards Identification

Primary Routes(s) Of Entry - Ingestion (possible, but considered unlikely), eye contact, skin contact, inhalation.
Eye Hazards - Causes eye irritation.
Skin Hazards - Causes skin irritation.
Ingestion Hazards - This is an aerosol product, ingestion is unlikely to occur. Contains petroleum distillate, harmful if swallowed. If accidentally swallowed, do not induce vomiting. Call physician immediately.
Inhalation Hazards - Deliberate inhalation of concentrate vapor or mist may cause headache, dizziness and nausea..
Chronic/Carcinogenicity Effects - Toluene and xylene have been associated with kidney and liver disorders. This product contains carbon black. IARC classifies carbon black as possibly carcinogenic to humans (group 2B) based on sufficient evidence of carcinogenicity in animals, but inadequate evidence for cancer in exposed humans.
Epidemiology - None known

3. Hazards Identification - Continued

Teratogenicity (Birth Defects) - California's Proposition 65: "Warning: this product contains toluene, a chemical known to the State of California to cause birth defects or other reproductive harm".
Reproductive Effects - Suspect reproductive hazard. Contains material which may cause birth defects, based on animal data. This product contains toluene.
Neurotoxicity - None known
Mutagenicity (Genetic Effect) - None known
Signs And Symptoms - Acute: Prolonged inhalation of vapor or mist may cause headache, dizziness and nausea. Prolonged contact with the skin causes irritation. Irritant to eyes.
Conditions Aggravated By Exposure - Pre-existing skin, respiratory, liver and kidney disorders.
Conditions Aggravated By Overexposure - Pre-existing skin, respiratory, liver and kidney disorders.

First Aid (Pictograms)



4. First Aid Measures

Eye - Flush from eyes with plenty of water. If irritation develops, consult a physician.
Skin - Wash skin with soap and water. If irritation develops, consult a physician.
Ingestion - Ingestion from an aerosol product is unlikely to occur. Contains petroleum distillates. Harmful if swallowed. If accidentally swallowed, do not induce vomiting, call physician immediately.
Inhalation - If overcome by vapor move victim to fresh air. Provide artificial respiration if necessary. Consult a physician if injury develops.

5. Fire Fighting Measures

Flash Point: <20 °F
Flash Point Method: estimated
Lower Explosive Limit: Not available
Upper Explosive Limit: Not available

Fire And Explosion Hazards - This product is an aerosol product for which **Flame Projection is 18 in, with flashback.** Temperatures above 120 F may cause cans to burst.
Extinguishing Media - Use CO_2 (Carbon Dioxide), dry chemical, or water fog.
Fire Fighting Instructions - Water spray may be used to cool cans in the vicinity of fire or excessive heat.

6. Accidental Release Measures

Provide adequate ventilation to area being treated. Soak up spills with chemically inert, absorbent material.

Handling & Storage (Pictograms)

7. Handling And Storage

Handling And Storage Precautions - Handle as an extremely flammable material. Store in a cool, dry place away from heat and open flame.
Handling Precautions - Avoid getting spray into eyes. Keep out of reach of children.
Storage Precautions - Keep away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors and static electricity).

7. Handling And Storage - Continued

AEROSOL STORAGE LEVEL III (NFPA-30B)
Work/Hygienic Practices - Wash hands thoroughly after using this product.

Protective Clothing (Pictograms)

8. Exposure Controls/Personal Protection

Engineering Controls - Use with adequate general and local exhaust ventilation.
Eye/Face Protection - Conventional eyeglasses to guard against splashing.
Skin Protection - Rubber, vinyl or household type gloves.
Respiratory Protection - Use in well-ventilated area ONLY. NOTICE: Reports have associated repeated and prolonged occupational over exposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. To avoid breathing vapor or spray mist, open windows and doors or use other means to ensure fresh air entry during application and drying. If you experience eye watering, headaches, or dizziness, increase fresh air or wear respiratory protection (NIOSH/MSHA TC-23C or equivalent), or leave the area.

Ingredient(s) - Exposure Limits

2-BUTOXYETHANOL
ACGIH TLV-TWA 20 ppm (Skin) ; OSHA PEL-TWA 50 ppm (Skin)
ACETONE
ACGIH TLV-STEL 750 ppm ; ACGIH TLV-TWA 500 ppm ; OSHA PEL-TWA 1,000 ppm
BUTANE
ACGIH TLV-TWA 800 ppm
CARBON BLACK
ACGIH TLV-TWA 3.5 mg/m3 ; OSHA PEL-TWA 3.5 mg/m3
LIGHT ALIPHATIC NAPHTHA
OSHA PEL 400ppm ; ACGIH TLV 300ppm
MINERAL SPIRITS
OSHA PEL 100ppm ; ACGIH TLV 100ppm
PROPANE
ACGIH TLV-TWA 2500 ppm ; OSHA PEL-TWA 1,000 ppm
TOLUENE
ACGIH TLV-TWA 50 ppm (Skin) ; OSHA PEL-CEILING 300 ppm ; OSHA PEL-PEAK 500 ppm
OSHA PEL-TWA 200 ppm
V.M. & P. NAPHTHA
ACGIH TLV-TWA 300 ppm
XYLENE (MIXED ISOMERS)
ACGIH TLV-STEL 150 ppm ; ACGIH TLV-TWA 100 ppm ; OSHA PEL-TWA 100 ppm

9. Physical And Chemical Properties

Appearance - Appearance of paint.
Odor - Paint odor.

Chemical Type: Mixture
Physical State: Liquid
Melting Point: Not applicable °F Not applicable °C
Boiling Point: Acetone 133 °F Acetone 56 °C

9. Physical And Chemical Properties - Continued

Specific Gravity: 0.851
Percent VOCs: 58.1
Solubility: Insoluble
Evaporation Rate: Faster than butyl acetate

10. Stability And Reactivity

Stability: Stable
Hazardous Polymerization: Will not occur

Conditions To Avoid (Stability) - Temperatures above 120 F
Incompatible Materials - Avoid heat, open flame and contact with strong oxidizers.
Hazardous Decomposition Products - Thermal decomposition may yield gases like carbon monoxide and carbon dioxide.
Conditions To Avoid (Polymerization) - Temperatures above 120 F

11. Toxicological Information

Ingredient(s) - Carginogenicity
CARBON BLACK
Listed In The IARC Monographs

12. Ecological Information

No Data Available...

13. Disposal Considerations

Wrap empty container in newspaper and dispose of it in non-incinerated trash only.

14. Transport Information

Proper Shipping Name - ORM-D Consumer Commodity

DOT Identification Number
UN1950

DOT Shipping Label
Aerosol Consumer Commodity

15. Regulatory Information

U.S. Regulatory Information - All ingredients of this product are listed or are excluded from listing under the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

SARA Hazard Classes
Acute Health Hazard; Chronic Health Hazard; Fire Hazard

SARA Title III - Section 313 Form "R"/TRI Reportable Chemical

SARA Section 313 Notification - This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372. This information must be included in all MSDSs that are copied and distributed for this material. This product contains: 2-Butoxyethanol, Toluene, and Xylene. See section 2 for % amounts in the product.

15. Regulatory Information - Continued

Ingredient(s) - U.S. Regulatory Information

2-BUTOXYETHANOL
SARA Title III - Section 313 Form "R"/TRI Reportable Chemical; SARA - Acute Health Hazard; SARA - Chronic Health Hazard; SARA - Fire Hazard

TOLUENE
SARA Title III - Section 313 Form "R"/TRI Reportable Chemical; SARA - Acute Health Hazard; SARA - Chronic Health Hazard; SARA - Fire Hazard

XYLENE (MIXED ISOMERS)
SARA Title III - Section 313 Form "R"/TRI Reportable Chemical; SARA - Acute Health Hazard; SARA - Chronic Health Hazard; SARA - Fire Hazard

Ingredient(s) - State Regulations

2-BUTOXYETHANOL
New Jersey - Workplace Hazard; New Jersey - Environmental Hazard; Pennsylvania - Workplace Hazard; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

ACETONE
New Jersey - Workplace Hazard; Pennsylvania - Workplace Hazard; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

BUTANE
New Jersey - Workplace Hazard; New Jersey - Environmental Hazard; New Jersey - Special Hazard; Pennsylvania - Workplace Hazard; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

CARBON BLACK
New Jersey - Workplace Hazard; Pennsylvania - Workplace Hazard; Massachusetts - Hazardous Substance

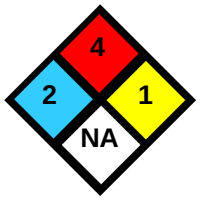
PROPANE
New Jersey - Workplace Hazard; New Jersey - Environmental Hazard; New Jersey - Special Hazard; Pennsylvania - Workplace Hazard; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

TOLUENE
New Jersey - Workplace Hazard; New Jersey - Environmental Hazard; New Jersey - Special Hazard; Pennsylvania - Workplace Hazard; Pennsylvania - Environmental Hazard; California - Proposition 65; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

V.M. & P. NAPHTHA
New Jersey - Workplace Hazard; Pennsylvania - Workplace Hazard; New York City - Hazardous Substance

XYLENE (MIXED ISOMERS)
New Jersey - Workplace Hazard; New Jersey - Environmental Hazard; New Jersey - Special Hazard; Pennsylvania - Workplace Hazard; Pennsylvania - Environmental Hazard; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

NFPA



HMIS

HEALTH	*2
FLAMMABILITY	4
REACTIVITY	1
PERSONAL PROTECTION	B

16. Other Information

Revision/Preparer Information
MSDS Preparer: Laura E. Radevski
MSDS Preparer Phone Number: 708-865-1000

Disclaimer

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitablility of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purposes(s).

PPG Architectural Finishes, Inc

Printed Using MSDS Generator™ 2000

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY INFORMATION

PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

EMERGENCY PHONE NUMBERS (24 hours/day): **(304) 843-1300 (U.S.)**
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)
0532-3889090 (China)

TECHNICAL INFORMATION: 1-800-441-9695 (ARCHITECTURAL FINISHES, INC.)
PRODUCT SAFETY/MSDS INFORMATION: (412) 492-5555 7:00 a.m. - 4:30 p.m. EST
PRODUCT ID: 55-611 (0814-T0)
PRODUCT NAME: PITTBULL WHITE SPRAY
SYNONYMS: None
ISSUE DATE: 03/10/2004
EDITION NO.: 2
CHEMICAL FAMILY: ALKYD

EMERGENCY OVERVIEW:

Extremely flammable. Vapors may cause flash fires. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. Extinguish all flames and pilot lights. Turn off stoves, heaters, electrical motors, and other sources of ignition during use and until all vapors/odors are gone.CAUSES EYE IRRITATION. MAY CAUSE MODERATE SKIN IRRITATION. VAPOR AND/OR SPRAY MIST MAY BE HARMFUL IF INHALED. VAPOR IRRITATES EYES, NOSE, AND THROAT.HARMFUL IF SWALLOWED.
This is an overview of acute and physical hazards associated with this product. Please read the entire MSDS for complete information.

SECTION 2 - COMPOSITION INFORMATION

The following ingredient(s) marked with an "x" are considered hazardous under applicable U.S. OSHA and/or Canadian WHMIS regulations. If no ingredients are listed, then there are no U.S. OSHA and/or Canadian WHMIS hazardous ingredients in this product.

Material/ CAS Number	Percent	Hazardous	
ACETONE 67-64-1	10 - 30	X	
PROPANE 74-98-6	10 - 30	X	
TOLUENE 108-88-3	10 - 30	X	
BUTANE 106-97-8	10 - 30	X	
NAPHTHA 64742-89-8	1 - 5	X	
V.M. AND P. NAPHTHA 8032-32-4	1 - 5	X	
[As Rubber solvent (Naphtha)] 8032-32-4	*	X	See Sections 8 and 15 for information.

SECTION 3 - HAZARDS IDENTIFICATION

ACUTE OVEREXPOSURE EFFECTS

EYE CONTACT:
Causes eye irritation. Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact.
SKIN CONTACT:
May cause moderate skin irritation. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.
SKIN ABSORPTION:

INHALATION:
Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat.
INGESTION:
Harmful if swallowed.
SIGNS & SYMPTOMS OF OVEREXPOSURE:
Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Eye watering, headaches, nausea, dizziness and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.
CHRONIC OVEREXPOSURE EFFECTS
Avoid long-term and repeated contact.
Repeated exposure to vapors above recommended exposure limits (see Section 8) may cause irritation of the respiratory system and permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. This product contains toluene. Toluene inhalation in animals (greater than 1500 ppm) and intentional inhalation of toluene-containing products by humans (e.g. glue) has caused adverse fetal development effects.
The effects of long-term, low level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the prevention of all contact with this material to avoid any effects from repetitive acute exposures. See Section 11, of this MSDS for a detailed list of chronic health effects information available on individual ingredients in this product.

SECTION 4 - FIRST AID MEASURES

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available.
EYE CONTACT:
Remove contact lens and pour a gentle stream of warm water through the affected eye for at least 15 minutes. If irritation persists, contact a poison control center, emergency room, or physician as further treatment may be necessary.
SKIN CONTACT:
Run a gentle stream of water over the affected area for 15 minutes. A mild soap may be used if available. If any symptoms persist, contact a poison control center, emergency room, or physician as further treatment may be necessary.
INHALATION:
Remove from area to fresh air. If symptomatic, contact a poison control center, emergency room or physician for treatment information.

.
INGESTION:
Gently wipe or rinse the inside of the mouth with water. Sips of water may be given. Never give anything by mouth to an unconscious person. Contact a poison control center, emergency room or physician right away as further treatment may be necessary.

SECTION 5 - FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES
FLASHPOINT: -76 Degrees F (-60 Degrees C)
FLASHPOINT TEST METHOD:
Pensky-Martens Closed Cup
UEL: Not Available.
LEL: 2.3

AUTOIGNITION TEMPERATURE:
Not Available.
EXTINGUISHING MEDIA:
Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA Class IA flammable liquid fires. Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.
PROTECTION OF FIREFIGHTERS:
Fire-fighters should wear self-contained breathing apparatus and full protective clothing.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
When this product is used, the overspray and other combustible materials such as paint booth filters, rags, masking materials, etc., contaminated by coating material are subject to spontaneous combustion. Wetting the contaminated materials and not packing them tightly together in refuse containers will minimize the potential for this to occur. Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat. Aerosol-containers hold extremely flammable gas and flammable liquid under pressure. May produce hazardous decomposition products when exposed to extreme heat. Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

SECTION 6 - ACCIDENTAL RELEASE MEASURE

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN DURING HANDLING AND STORAGE:
Store in a cool, dry, well-ventilated place.
STORAGE:
Store in cool dry place.

SECTION 8 - EXPOSURE CONTROLS & PERSONAL PROTECTION

ENGINEERING CONTROLS:
Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 8 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

PERSONAL PROTECTIVE EQUIPMENT
EYES:
Wear chemical-type splash goggles when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapors.
SKIN/GLOVES:
Wear protective clothing to prevent skin contact. Apron and gloves should be constructed of: impermeable material. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment. Clean contaminated clothing and shoes.

RESPIRATOR:
Overexposure to vapors may be prevented by ensuring proper ventilation controls, vapor exhaust or fresh air entry. A NIOSH- approved air purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may also reduce exposure. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used. Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.
GENERAL HYGIENE - ESTABLISHED EXPOSURE LIMITS
If Threshold Limit Values (TLVs) have been established by ACGIH, OSHA, Ontario or PPG, they will be listed below. These limits are intended for use in the practice of industrial hygiene as guidelines or recommendations in the control of potential workplace health hazards. These limits are not a relative index of toxicity and should not be used by anyone without industrial hygiene training.

Material/ CAS Number	Percent	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
ACETONE 67-64-1	10 - 30	500 ppm	750 ppm	750 ppm	1000 ppm
PROPANE 74-98-6	10 - 30	2500 ppm	Not established	1000 ppm	Not established
TOLUENE 108-88-3	10 - 30	S- 50 ppm	Not established	100 ppm	150 ppm
BUTANE 106-97-8	10 - 30	800 ppm	Not established	800 ppm	Not established
V.M. AND P. NAPHTHA 8032-32-4	1 - 5	300 ppm	Not established	300 ppm	400 ppm

Key: OSHA=Occupational Safety and Health Administration; PEL=Permissable Exposure Limit; Ceiling=PEL Ceiling Limit; STEL=PEL Short-Term Exposure Limit; Skin=OSHA Skin Designation.

Material/ CAS Number	Percent	Ontario TWA	Ontario STEL	PPG IPEL	PPG STEL
ACETONE 67-64-1	10 - 30	R- 500 PPM	750 PPM	Not established	Not established
PROPANE 74-98-6	10 - 30	2500 PPM	Not established	Not established	Not established
TOLUENE 108-88-3	10 - 30	50 PPM	Not established	Not established	Not established
BUTANE 106-97-8	10 - 30	800 ppm	Not established	Not established	Not established
V.M. AND P. NAPHTHA 8032-32-4	1 - 5	500 MG/m^3	Not established	Not established	Not established
[As Rubber solvent (Naphtha)] 8032-32-4	*	1600MG/m^3	Not established	Not established	Not established

Key: ACGIH=American Conference of Governmental Industrial Hygienists; OSHA=Occupational Safety and Health Administration; TLV=Threshold Limit Value; TWA=Time Weighted Average; PEL=Permissible Exposure Limit; IPEL=Internal Permissible Exposure Limit; Ceiling=TLV or PEL Ceiling Limit; STEL=TLV or PEL Short-Term Exposure Limit; Skin= Skin Absorption Designation. [C- Ceiling Limit; S-Potential Skin Aborption; R-Respirable Dust]
Additional Information Not applicable.

SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES

(FORMULA VALUES, NOT SALES SPECIFICATIONS)

SPECIFIC GRAVITY: .755
PHYSICAL STATE: Liquid
PERCENT SOLIDS: 16.71

PERCENT VOLATILE BY VOLUME:	89.090
pH:	Not available.
ODOR THRESHOLD:	Not available.
VAPOUR PRESSURE (mm Hg):	71.6 mmHg
ODOR/APPEARANCE:	Pressurized can containing paint and propellants with odor characteristics of solvents listed in Section 2.
VAPOR DENSITY:	HEAVIER THAN AIR
EVAPORATION RATE:	431
BOILING POINT OR RANGE:	-20- 291Degrees F
FREEZING POINT OR RANGE:	Not Applicable.
MELTING POINT OR RANGE:	Not Applicable.
OCTANOL/WATER PARTITION COEFFICIENT:	Not Applicable.
WEIGHT PER GALLON:	6.29 (U.S.) / 7.5 (IMPERIAL)

SECTION 10 - STABILITY AND REACTIVITY

STABILITY:
This product is normally stable and will not undergo hazardous reactions.
CONDITIONS TO AVOID:
None Known.
INCOMPATIBLE MATERIALS:
Avoid contact with strong alkalies, strong mineral acids, or strong oxidizing agents.
HAZARDOUS POLYMERIZATION:
None Known.
HAZARDOUS DECOMPOSITION PRODUCTS:
- Carbon monoxide - Carbon dioxide - Lower molecular weight polymer fractions

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Material/ CAS Number	Percent	ORAL LD50 (g/kg)	DERMAL LD50 (g/kg)	INHALATION LC50 (mg/l)
ACETONE 67-64-1	10 - 30	5.80 g/kg	20.00 g/kg	Not Available
TOLUENE 108-88-3	10 - 30	5.00 g/kg	12.12 g/kg	Not Available

CHRONIC TOXICITY
TARGET ORGANS:
- Teratogen - Brain - Central nervous system - Lung

MUTAGENICITY:
This has not been tested for this product.
REPRODUCTIVE:
This has not been tested for this product.

SUPPLEMENTAL HEALTH INFORMATION:

SECTION 12 - ECOLOGICAL INFORMATION

POTENTIAL ENVIRONMENTAL EFFECTS:

Ecotoxicity	No data available

ENVIRONMENTAL FATE

MOBILITY:	None Known.
BIODEGRADATION:	None Known.
Bioaccumulation	No data available

PHYSICAL/CHEMICAL

HYDROLYSIS:	None Known.
PHOTOLYSIS:	None Known.

SECTION 13 - DISPOSAL CONSIDERATIONS

Provide maximum ventilation, only personnel equipped with proper respiratory and skin and eye protection should be permitted in the area. Take up spilled material with sawdust, vermiculite, or other absorbent material and place in containers for disposal.
Waste material must be disposed of in accordance with federal, state, provincial and local environmental control regulations. Empty containers should be recycled by an appropriately licensed reconditioner/salvager or disposed of through a permitted waste management facility. Additional disposal information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

SECTION 14 - TRANSPORTATION INFORMATION

Proper Shipping Name:	NOT AVAILABLE
NOS Technical Name:	NOT AVAILABLE
Hazard Class:	N.A.
Subsidiary Class(es):	N.A.
UN Number:	N.A.
Packing Group:	N.A.

USA - RQ Hazardous Substances:	NOT AVAILABLE
USA-RQ Hazardous Substance Threshold Ship Weight:	NOT AVAILABLE
Marine Pollutant Name:	NOT AVAILABLE

SECTION 15 - REGULATORY INFORMATION

INVENTORY STATUS
U.S. TSCA: This product and/or all of its components are listed on the U.S. TSCA Inventory or is otherwise exempt from TSCA Inventory reporting requirements.
FEDERAL REGULATIONS
US Regulations

Material/ CAS Number	Percent	CERCLA HS - RQ (LBS)	SARA EHS- TPQ (LBS)	SARA 313
ACETONE 67-64-1	10 - 30	5000 lbs	Not Listed	Not Listed
PROPANE 74-98-6	10 - 30	Not Listed	Not Listed	Not Listed
TOLUENE 108-88-3	10 - 30	1000 lbs	Not Listed	Listed
BUTANE 106-97-8	10 - 30	Not Listed	Not Listed	Not Listed
NAPHTHA 64742-89-8	1 - 5	Not Listed	Not Listed	Not Listed
V.M. AND P. NAPHTHA 8032-32-4	1 - 5	Not Listed	Not Listed	Not Listed
[As Rubber solvent (Naphtha)] 8032-32-4	*	Not Listed	Not Listed	Not Listed

SARA 311/312

Health (acute):	Yes
Health (chronic):	No
Fire (flammable):	Yes
Pressure:	Yes
Reactivity:	No

WHMIS HAZARD CLASS: - Class B, Division 6 - Class D, Division 2, Subdivision A

STATE/PROVINCIAL REGULATIONS

CALIFORNIA PROP. 65: WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Additional Information

Key: IARC- International Agency on the Research of Cancer; ACGIH- American Conference of Governmental Industrial Hygienists; NTP- National Toxicology Program *Denotes chemical as NTP Known Carcinogen; + Denotes NTP Possible Carcinogen; OSHA- Occupational Safety and Health Administration.

SECTION 16 - OTHER INFORMATION

Hazard Rating Systems
NFPA Rating: 2 30
HMIS Rating: 2 30

Rating System: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe, *=Chronic Effects.

HMIS=Hazardous Materials Identification System; NFPA=National Fire Protection Association;

Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments and conditions of use.

PREPARED BY: Product Safety Department
REASON FOR REVISION: Section 5 has been updated. Date. Edition. Updated MSDS
format.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200), the supplier notification requirements of SARA Title III, Section 313 and other applicable right-to-know regulations.
Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.
55-611 000000 (00284443.001)(03/09/04)
040308, 000, 0814

*** END OF MSDS ***

26.3 % 0000 1 0814 55-611 ,0814,000 55-611 00003/09/04

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY INFORMATION

PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

EMERGENCY PHONE NUMBERS (24 hours/day): **(304) 843-1300 (U.S.)**
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)
0532-3889090 (China)

TECHNICAL INFORMATION: 1-800-441-9695 (ARCHITECTURAL FINISHES, INC.)
PRODUCT SAFETY/MSDS INFORMATION: (412) 492-5555 7:00 a.m. - 4:30 p.m. EST
PRODUCT ID: 55-612 (0814-T0)
PRODUCT NAME: PITTBULL FLT BLACK SPRAY
SYNONYMS: None
ISSUE DATE: 03/10/2004
EDITION NO.: 2
CHEMICAL FAMILY: ALKYD

EMERGENCY OVERVIEW:
Extremely flammable. Vapors may cause flash fires. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. Extinguish all flames and pilot lights. Turn off stoves, heaters, electrical motors, and other sources of ignition during use and until all vapors/odors are gone.CAUSES EYE IRRITATION. MAY CAUSE MODERATE SKIN IRRITATION. VAPOR AND/OR SPRAY MIST MAY BE HARMFUL IF INHALED. VAPOR IRRITATES EYES, NOSE, AND THROAT.HARMFUL IF SWALLOWED.
This is an overview of acute and physical hazards associated with this product. Please read the entire MSDS for complete information.

SECTION 2 - COMPOSITION INFORMATION

The following ingredient(s) marked with an "x" are considered hazardous under applicable U.S. OSHA and/or Canadian WHMIS regulations. If no ingredients are listed, then there are no U.S. OSHA and/or Canadian WHMIS hazardous ingredients in this product.

Material/ CAS Number	Percent	Hazardous	
ACETONE 67-64-1	15 - 40	X	
PROPANE 74-98-6	10 - 30	X	
BUTANE 106-97-8	7 - 13	X	
TOLUENE 108-88-3	7 - 13	X	
XYLENES 1330-20-7	1 - 5	X	
V.M. AND P. NAPHTHA 8032-32-4	1 - 5	X	
NAPHTHA 64742-89-8	1 - 5	X	
ETHYL BENZENE 100-41-4	0.1-1.0	X	
CARBON BLACK 1333-86-4	0.1-1.0	X	
[As Rubber solvent (Naphtha)] 8032-32-4	*	X	See Sections 8 and 15 for information.

SECTION 3 - HAZARDS IDENTIFICATION

ACUTE OVEREXPOSURE EFFECTS

EYE CONTACT:
Causes eye irritation. Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact.
SKIN CONTACT:
May cause moderate skin irritation. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.
SKIN ABSORPTION:

INHALATION:
Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat.
INGESTION:
Harmful if swallowed.
SIGNS & SYMPTOMS OF OVEREXPOSURE:
Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Eye watering, headaches, nausea, dizziness and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.
CHRONIC OVEREXPOSURE EFFECTS
Avoid long-term and repeated contact.
Repeated exposure to vapors above recommended exposure limits (see Section 8) may cause irritation of the respiratory system and permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. This product contains toluene. Toluene inhalation in animals (greater than 1500 ppm) and intentional inhalation of toluene-containing products by humans (e.g. glue) has caused adverse fetal development effects. High exposures to xylenes in some animal studies have been reported to cause health effects on the developing embryo and fetus. These effects were often at levels toxic to the mother.
The effects of long-term, low level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the prevention of all contact with this material to avoid any effects from repetitive acute exposures. See Section 11, of this MSDS for a detailed list of chronic health effects information available on individual ingredients in this product.

SECTION 4 - FIRST AID MEASURES

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available.
EYE CONTACT:
Remove contact lens and pour a gentle stream of warm water through the affected eye for at least 15 minutes. If irritation persists, contact a poison control center, emergency room, or physician as further treatment may be necessary.
SKIN CONTACT:
Run a gentle stream of water over the affected area for 15 minutes. A mild soap may be used if available. If any symptoms persist, contact a poison control center, emergency room, or physician as further treatment may be necessary.
INHALATION:
Remove from area to fresh air. If symptomatic, contact a poison control center, emergency room or physician for treatment information.

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INGESTION:
Gently wipe or rinse the inside of the mouth with water. Sips of water may be given. Never give anything by mouth to an unconscious person. Contact a poison control center, emergency room or physician right away as further treatment may be necessary.

SECTION 5 - FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES
FLASHPOINT: -76 Degrees F (-60 Degrees C)
FLASHPOINT TEST METHOD:
Pensky-Martens Closed Cup
UEL: Not Available.
LEL: 2.4
AUTOIGNITION TEMPERATURE:
Not Available.
EXTINGUISHING MEDIA:
Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA Class IA flammable liquid fires. Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.
PROTECTION OF FIREFIGHTERS:
Fire-fighters should wear self-contained breathing apparatus and full protective clothing.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
When this product is used, the overspray and other combustible materials such as paint booth filters, rags, masking materials, etc., contaminated by coating material are subject to spontaneous combustion. Wetting the contaminated materials and not packing them tightly together in refuse containers will minimize the potential for this to occur. Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat. Aerosol-containers hold extremely flammable gas and flammable liquid under pressure. May produce hazardous decomposition products when exposed to extreme heat. Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

SECTION 6 - ACCIDENTAL RELEASE MEASURE

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN DURING HANDLING AND STORAGE:
Store in a cool, dry, well-ventilated place.
STORAGE:
Store in cool dry place.

SECTION 8 - EXPOSURE CONTROLS & PERSONAL PROTECTION

ENGINEERING CONTROLS:
Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 8 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

PERSONAL PROTECTIVE EQUIPMENT

EYES:
Wear chemical-type splash goggles when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapors.
SKIN/GLOVES:
Wear protective clothing to prevent skin contact. Apron and gloves should be constructed of: impermeable material. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment. Clean contaminated clothing and shoes.
RESPIRATOR:
Overexposure to vapors may be prevented by ensuring proper ventilation controls, vapor exhaust or fresh air entry. A NIOSH- approved air purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may also reduce exposure. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used. Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.
GENERAL HYGIENE - ESTABLISHED EXPOSURE LIMITS
If Threshold Limit Values (TLVs) have been established by ACGIH, OSHA, Ontario or PPG, they will be listed below. These limits are intended for use in the practice of industrial hygiene as guidelines or recommendations in the control of potential workplace health hazards. These limits are not a relative index of toxicity and should not be used by anyone without industrial hygiene training.

Material/ CAS Number	Percent	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
ACETONE 67-64-1	15 - 40	500 ppm	750 ppm	750 ppm	1000 ppm
PROPANE 74-98-6	10 - 30	2500 ppm	Not established	1000 ppm	Not established
BUTANE 106-97-8	7 - 13	800 ppm	Not established	800 ppm	Not established
TOLUENE 108-88-3	7 - 13	S- 50 ppm	Not established	100 ppm	150 ppm
XYLENES 1330-20-7	1 - 5	100 ppm	150 ppm	100 ppm	150 ppm
V.M. AND P. NAPHTHA 8032-32-4	1 - 5	300 ppm	Not established	300 ppm	400 ppm
ETHYL BENZENE 100-41-4	0.1-1.0	100 ppm	125 ppm	100 ppm	125 ppm
CARBON BLACK 1333-86-4	0.1-1.0	3.5 mg/m^3	Not established	3.5 mg/m^3	Not established

Key: OSHA=Occupational Safety and Health Administration; PEL=Permissable Exposure Limit; Ceiling=PEL Ceiling Limit; STEL=PEL Short-Term Exposure Limit; Skin=OSHA Skin Designation.

Material/ CAS Number	Percent	Ontario TWA	Ontario STEL	PPG IPEL	PPG STEL
ACETONE 67-64-1	15 - 40	R- 500 PPM	750 PPM	Not established	Not established
PROPANE 74-98-6	10 - 30	2500 PPM	Not established	Not established	Not established
BUTANE 106-97-8	7 - 13	800 ppm	Not established	Not established	Not established
TOLUENE 108-88-3	7 - 13	50 PPM	Not established	Not established	Not established
XYLENES 1330-20-7	1 - 5	100 ppm	150 ppm	Not established	Not established
V.M. AND P. NAPHTHA 8032-32-4	1 - 5	500 MG/m^3	Not established	Not established	Not established
ETHYL BENZENE 100-41-4	0.1-1.0	100 ppm	125 ppm	Not established	Not established
CARBON BLACK 1333-86-4	0.1-1.0	3.5 mg/m^3	Not established	Not established	Not established
[As Rubber solvent (Naphtha)] 8032-32-4	*	1600MG/m^3	Not established	Not established	Not established

Key: ACGIH=American Conference of Governmental Industrial Hygienists; OSHA=Occupational Safety and Health Administration; TLV=Threshold Limit Value; TWA=Time Weighted Average; PEL=Permissible Exposure Limit; IPEL=Internal Permissible Exposure Limit; Ceiling=TLV or PEL Ceiling Limit; STEL=TLV or PEL Short-Term Exposure Limit; Skin= Skin Absorption Designation. [C- Ceiling Limit; S-Potential Skin Aborption; R-Respirable Dust]
Additional Information Not applicable.

SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES

(FORMULA VALUES, NOT SALES SPECIFICATIONS)

SPECIFIC GRAVITY: .739
PHYSICAL STATE: Liquid
PERCENT SOLIDS: 12.46
PERCENT VOLATILE BY VOLUME: 90.490
pH: Not available.
ODOR THRESHOLD: Not available.
VAPOUR PRESSURE (mm Hg): 87.7 mmHg
ODOR/APPEARANCE: Pressurized can containing paint and propellants with odor characteristics of solvents listed in Section 2.
VAPOR DENSITY: HEAVIER THAN AIR
EVAPORATION RATE: 529
BOILING POINT OR RANGE: -20- 293Degrees F
FREEZING POINT OR RANGE: Not Applicable.
MELTING POINT OR RANGE: Not Applicable.
OCTANOL/WATER PARTITION COEFFICIENT: Not Applicable.
WEIGHT PER GALLON: 6.16 (U.S.) / 7.3 (IMPERIAL)

SECTION 10 - STABILITY AND REACTIVITY

STABILITY:
This product is normally stable and will not undergo hazardous reactions.
CONDITIONS TO AVOID:
None Known.
INCOMPATIBLE MATERIALS:
Avoid contact with strong alkalies, strong mineral acids, or strong oxidizing agents.
HAZARDOUS POLYMERIZATION:
None Known.
HAZARDOUS DECOMPOSITION PRODUCTS:
- Carbon monoxide - Carbon dioxide - Lower molecular weight polymer fractions

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Material/ CAS Number	Percent	ORAL LD50 (g/kg)	DERMAL LD50 (g/kg)	INHALATION LC50 (mg/l)
ACETONE 67-64-1	15 - 40	5.80 g/kg	20.00 g/kg	Not Available
TOLUENE 108-88-3	7 - 13	5.00 g/kg	12.12 g/kg	Not Available
XYLENES 1330-20-7	1 - 5	4.30 g/kg	Not Available	Not Available
ETHYL BENZENE 100-41-4	0.1-1.0	3.50 g/kg	17.80 g/kg	Not Available

CHRONIC TOXICITY
TARGET ORGANS:
- Kidney - Liver - Teratogen - Embryotoxin - Carcinogen - Brain - Central nervous system - Lung

MUTAGENICITY:
This has not been tested for this product.
REPRODUCTIVE:
This has not been tested for this product.

SUPPLEMENTAL HEALTH INFORMATION:

Material/ CAS Number	Percent	Ingredient Specific Animal Data:
ETHYL BENZENE 100-41-4	0.1-1.0	Ethylbenzene has been reported by NTP to cause cancer in laboratory animals following a chronic (2 year) inhalation exposure. Dose levels of 75, 250 and 750 ppm were used, with evidence of carcinogenicity found in the kidneys of rats and the lung and liver of mice at 750 ppm. The No Observed Effect Level (NOEL) was 75 ppm. The relevance of these findings to humans is uncertain, but appropriate safeguards should be employed to reduce or eliminate inhalation exposure to ethylbenzene.

SECTION 12 - ECOLOGICAL INFORMATION

POTENTIAL ENVIRONMENTAL EFFECTS:
Ecotoxicity No data available

ENVIRONMENTAL FATE
MOBILITY: None Known.
BIODEGRADATION: None Known.
Bioaccumulation No data available

PHYSICAL/CHEMICAL

HYDROLYSIS: None Known.
PHOTOLYSIS: None Known.

SECTION 13 - DISPOSAL CONSIDERATIONS

Provide maximum ventilation, only personnel equipped with proper respiratory and skin and eye protection should be permitted in the area. Take up spilled material with sawdust, vermiculite, or other absorbent material and place in containers for disposal.
Waste material must be disposed of in accordance with federal, state, provincial and local environmental control regulations. Empty containers should be recycled by an appropriately licensed reconditioner/salvager or disposed of through a permitted waste management facility. Additional disposal information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

SECTION 14 - TRANSPORTATION INFORMATION

Proper Shipping Name: Aerosols
NOS Technical Name: None
Hazard Class: 2.1
Subsidiary Class(es): None
UN Number: UN1950
Packing Group: N/A

USA - RQ Hazardous Substances: None
USA-RQ Hazardous Substance Threshold Ship Weight: None
Marine Pollutant Name: None

SECTION 15 - REGULATORY INFORMATION

INVENTORY STATUS
U.S. TSCA: This product and/or all of its components are listed on the U.S. TSCA Inventory or is otherwise exempt from TSCA Inventory reporting requirements.
FEDERAL REGULATIONS
US Regulations

Material/ CAS Number	Percent	CERCLA HS - RQ (LBS)	SARA EHS- TPQ (LBS)	SARA 313
ACETONE 67-64-1	15 - 40	5000 lbs	Not Listed	Not Listed
PROPANE 74-98-6	10 - 30	Not Listed	Not Listed	Not Listed
BUTANE 106-97-8	7 - 13	Not Listed	Not Listed	Not Listed
TOLUENE 108-88-3	7 - 13	1000 lbs	Not Listed	Listed
XYLENES 1330-20-7	1 - 5	100 lbs	Not Listed	Listed
V.M. AND P. NAPHTHA 8032-32-4	1 - 5	Not Listed	Not Listed	Not Listed
NAPHTHA 64742-89-8	1 - 5	Not Listed	Not Listed	Not Listed
ETHYL BENZENE 100-41-4	0.1-1.0	1000 lbs	Not Listed	Listed
CARBON BLACK 1333-86-4	0.1-1.0	Not Listed	Not Listed	Not Listed
[As Rubber solvent (Naphtha)] 8032-32-4	*	Not Listed	Not Listed	Not Listed

SARA 311/312
Health (acute): Yes
Health (chronic): Yes
Fire (flammable): Yes
Pressure: Yes
Reactivity: No
WHMIS HAZARD CLASS: - Class B, Division 6 - Class D, Division 2, Subdivision A

STATE/PROVINCIAL REGULATIONS
CALIFORNIA PROP. 65: WARNING: This product contains a chemical(s) known to the State of California to cause cancer and birth defects or other reproductive harm.
Additional Information

Material/ CAS Number	Percent	IARC Group 1(Known Human Carc.)	IARC Group 2A (Probable Carc.)	IARC 2B (Suspected Carc.)	ACGIH Carc.	NTP Known Carc.	OSHA Carc.
ETHYL BENZENE 100-41-4	0.1-1.0	N	N	Y	N	N	N
CARBON BLACK 1333-86-4	0.1-1.0	N	N	Y	N	N	N

Key: IARC- International Agency on the Research of Cancer; ACGIH- American Conference of Governmental Industrial Hygienists; NTP- National Toxicology Program *Denotes chemical as NTP Known Carcinogen; + Denotes NTP Possible Carcinogen; OSHA- Occupational Safety and Health Administration.

SECTION 16 - OTHER INFORMATION

Hazard Rating Systems
NFPA Rating: 2 30
HMIS Rating: 2*30

Rating System: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe, *=Chronic Effects.

HMIS=Hazardous Materials Identification System; NFPA=National Fire Protection Association;

Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments and conditions of use.

PREPARED BY: Product Safety Department
REASON FOR REVISION: Section 5 has been updated. Date. Edition. Updated MSDS
format.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200), the supplier notification requirements of SARA Title III, Section 313 and other applicable right-to-know regulations.
Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.
55-612 000000 (00284444.001)(03/09/04)
040308, 000, 0814

*** END OF MSDS ***

36.4 % 0000 1 0814 55-612 ,0814,000 55-612 00003/09/04

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY INFORMATION

PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

EMERGENCY PHONE NUMBERS (24 hours/day): **(304) 843-1300 (U.S.)**
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)
0532-3889090 (China)

TECHNICAL INFORMATION: 1-800-441-9695 (ARCHITECTURAL FINISHES, INC.)
PRODUCT SAFETY/MSDS INFORMATION: (412) 492-5555 7:00 a.m. - 4:30 p.m. EST
PRODUCT ID: 55-624 (0814-T0)
PRODUCT NAME: PITTBULL SFTY RED SPRAY
SYNONYMS: None
ISSUE DATE: 03/10/2004
EDITION NO.: 1
CHEMICAL FAMILY: ALKYD

EMERGENCY OVERVIEW:
Extremely flammable. Vapors may cause flash fires. Keep away from heat, sparks, flames, and other sources of ignition. Do not smoke. Extinguish all flames and pilot lights. Turn off stoves, heaters, electrical motors, and other sources of ignition during use and until all vapors/odors are gone.CAUSES EYE IRRITATION. MAY CAUSE MODERATE SKIN IRRITATION. VAPOR AND/OR SPRAY MIST MAY BE HARMFUL IF INHALED. VAPOR IRRITATES EYES, NOSE, AND THROAT.HARMFUL IF SWALLOWED.
This is an overview of acute and physical hazards associated with this product. Please read the entire MSDS for complete information.

SECTION 2 - COMPOSITION INFORMATION

The following ingredient(s) marked with an "x" are considered hazardous under applicable U.S. OSHA and/or Canadian WHMIS regulations. If no ingredients are listed, then there are no U.S. OSHA and/or Canadian WHMIS hazardous ingredients in this product.

Material/ CAS Number	Percent	Hazardous	
ACETONE 67-64-1	10 - 30	X	
PROPANE 74-98-6	10 - 30	X	
TOLUENE 108-88-3	10 - 30	X	
BUTANE 106-97-8	10 - 30	X	
NAPHTHA 64742-89-8	1 - 5	X	
V.M. AND P. NAPHTHA 8032-32-4	1 - 5	X	
[As Rubber solvent (Naphtha)] 8032-32-4	*	X	See Sections 8 and 15 for information.

SECTION 3 - HAZARDS IDENTIFICATION

ACUTE OVEREXPOSURE EFFECTS

EYE CONTACT:
Causes eye irritation. Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact.
SKIN CONTACT:
May cause moderate skin irritation. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.
SKIN ABSORPTION:

INHALATION:
Vapor and/or spray mist may be harmful if inhaled. Vapor irritates eyes, nose, and throat.
INGESTION:
Harmful if swallowed.
SIGNS & SYMPTOMS OF OVEREXPOSURE:
Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Eye watering, headaches, nausea, dizziness and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.
CHRONIC OVEREXPOSURE EFFECTS
Avoid long-term and repeated contact.
Repeated exposure to vapors above recommended exposure limits (see Section 8) may cause irritation of the respiratory system and permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. This product contains toluene. Toluene inhalation in animals (greater than 1500 ppm) and intentional inhalation of toluene-containing products by humans (e.g. glue) has caused adverse fetal development effects.
The effects of long-term, low level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the prevention of all contact with this material to avoid any effects from repetitive acute exposures. See Section 11, of this MSDS for a detailed list of chronic health effects information available on individual ingredients in this product.

SECTION 4 - FIRST AID MEASURES

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available.
EYE CONTACT:
Remove contact lens and pour a gentle stream of warm water through the affected eye for at least 15 minutes. If irritation persists, contact a poison control center, emergency room, or physician as further treatment may be necessary.
SKIN CONTACT:
Run a gentle stream of water over the affected area for 15 minutes. A mild soap may be used if available. If any symptoms persist, contact a poison control center, emergency room, or physician as further treatment may be necessary.
INHALATION:
Remove from area to fresh air. If symptomatic, contact a poison control center, emergency room or physician for treatment information.

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INGESTION:
Gently wipe or rinse the inside of the mouth with water. Sips of water may be given. Never give anything by mouth to an unconscious person. Contact a poison control center, emergency room or physician right away as further treatment may be necessary.

SECTION 5 - FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES
FLASHPOINT: -76 Degrees F (-60 Degrees C)
FLASHPOINT TEST METHOD:
Pensky-Martens Closed Cup
UEL: Not Available.
LEL: 2.3

AUTOIGNITION TEMPERATURE:
Not Available.
EXTINGUISHING MEDIA:
Use National Fire Protection Association (NFPA) Class B extinguishers (carbon dioxide, dry chemical, or universal aqueous film forming foam) designed to extinguish NFPA Class IA flammable liquid fires. Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.
PROTECTION OF FIREFIGHTERS:
Fire-fighters should wear self-contained breathing apparatus and full protective clothing.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
When this product is used, the overspray and other combustible materials such as paint booth filters, rags, masking materials, etc., contaminated by coating material are subject to spontaneous combustion. Wetting the contaminated materials and not packing them tightly together in refuse containers will minimize the potential for this to occur. Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat. Aerosol-containers hold extremely flammable gas and flammable liquid under pressure. May produce hazardous decomposition products when exposed to extreme heat. Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

SECTION 6 - ACCIDENTAL RELEASE MEASURE

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN DURING HANDLING AND STORAGE:
Store in a cool, dry, well-ventilated place.
STORAGE:
Store in cool dry place.

SECTION 8 - EXPOSURE CONTROLS & PERSONAL PROTECTION

ENGINEERING CONTROLS:
Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 8 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

PERSONAL PROTECTIVE EQUIPMENT
EYES:
Wear chemical-type splash goggles when possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapors.
SKIN/GLOVES:
Wear protective clothing to prevent skin contact. Apron and gloves should be constructed of: impermeable material. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment. Clean contaminated clothing and shoes.

RESPIRATOR:
Overexposure to vapors may be prevented by ensuring proper ventilation controls, vapor exhaust or fresh air entry. A NIOSH- approved air purifying respirator with the appropriate chemical cartridges or a positive-pressure, air-supplied respirator may also reduce exposure. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used. Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.
GENERAL HYGIENE - ESTABLISHED EXPOSURE LIMITS
If Threshold Limit Values (TLVs) have been established by ACGIH, OSHA, Ontario or PPG, they will be listed below. These limits are intended for use in the practice of industrial hygiene as guidelines or recommendations in the control of potential workplace health hazards. These limits are not a relative index of toxicity and should not be used by anyone without industrial hygiene training.

Material/ CAS Number	Percent	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL
ACETONE 67-64-1	10 - 30	500 ppm	750 ppm	750 ppm	1000 ppm
PROPANE 74-98-6	10 - 30	2500 ppm	Not established	1000 ppm	Not established
TOLUENE 108-88-3	10 - 30	S- 50 ppm	Not established	100 ppm	150 ppm
BUTANE 106-97-8	10 - 30	800 ppm	Not established	800 ppm	Not established
V.M. AND P. NAPHTHA 8032-32-4	1 - 5	300 ppm	Not established	300 ppm	400 ppm

Key: OSHA=Occupational Safety and Health Administration; PEL=Permissable Exposure Limit; Ceiling=PEL Ceiling Limit; STEL=PEL Short-Term Exposure Limit; Skin=OSHA Skin Designation.

Material/ CAS Number	Percent	Ontario TWA	Ontario STEL	PPG IPEL	PPG STEL
ACETONE 67-64-1	10 - 30	R- 500 PPM	750 PPM	Not established	Not established
PROPANE 74-98-6	10 - 30	2500 PPM	Not established	Not established	Not established
TOLUENE 108-88-3	10 - 30	50 PPM	Not established	Not established	Not established
BUTANE 106-97-8	10 - 30	800 ppm	Not established	Not established	Not established
V.M. AND P. NAPHTHA 8032-32-4	1 - 5	500 MG/m^3	Not established	Not established	Not established
[As Rubber solvent (Naphtha)] 8032-32-4	*	1600MG/m^3	Not established	Not established	Not established

Key: ACGIH=American Conference of Governmental Industrial Hygienists; OSHA=Occupational Safety and Health Administration; TLV=Threshold Limit Value; TWA=Time Weighted Average; PEL=Permissible Exposure Limit; IPEL=Internal Permissible Exposure Limit; Ceiling=TLV or PEL Ceiling Limit; STEL=TLV or PEL Short-Term Exposure Limit; Skin= Skin Absorption Designation. [C- Ceiling Limit; S-Potential Skin Aborption; R-Respirable Dust]
Additional Information Not applicable.

SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES

(FORMULA VALUES, NOT SALES SPECIFICATIONS)

SPECIFIC GRAVITY: .725
PHYSICAL STATE: Liquid
PERCENT SOLIDS: 13.67

PERCENT VOLATILE BY VOLUME:	88.630
pH:	Not available.
ODOR THRESHOLD:	Not available.
VAPOUR PRESSURE (mm Hg):	72.7 mmHg
ODOR/APPEARANCE:	Pressurized can containing paint and propellants with odor characteristics of solvents listed in Section 2.
VAPOR DENSITY:	HEAVIER THAN AIR
EVAPORATION RATE:	432
BOILING POINT OR RANGE:	-20- 291Degrees F
FREEZING POINT OR RANGE:	Not Applicable.
MELTING POINT OR RANGE:	Not Applicable.
OCTANOL/WATER PARTITION COEFFICIENT:	Not Applicable.
WEIGHT PER GALLON:	6.04 (U.S.) / 7.2 (IMPERIAL)

SECTION 10 - STABILITY AND REACTIVITY

STABILITY:
This product is normally stable and will not undergo hazardous reactions.
CONDITIONS TO AVOID:
None Known.
INCOMPATIBLE MATERIALS:
Avoid contact with strong alkalies, strong mineral acids, or strong oxidizing agents.
HAZARDOUS POLYMERIZATION:
None Known.
HAZARDOUS DECOMPOSITION PRODUCTS:
- Carbon monoxide - Carbon dioxide - Lower molecular weight polymer fractions

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Material/ CAS Number	Percent	ORAL LD50 (g/kg)	DERMAL LD50 (g/kg)	INHALATION LC50 (mg/l)
ACETONE 67-64-1	10 - 30	5.80 g/kg	20.00 g/kg	Not Available
TOLUENE 108-88-3	10 - 30	5.00 g/kg	12.12 g/kg	Not Available

CHRONIC TOXICITY
TARGET ORGANS:
- Teratogen - Brain - Central nervous system - Lung

MUTAGENICITY:
This has not been tested for this product.
REPRODUCTIVE:
This has not been tested for this product.

SUPPLEMENTAL HEALTH INFORMATION:

SECTION 12 - ECOLOGICAL INFORMATION

POTENTIAL ENVIRONMENTAL EFFECTS:

Ecotoxicity	No data available

ENVIRONMENTAL FATE

MOBILITY:	None Known.
BIODEGRADATION:	None Known.
Bioaccumulation	No data available

PHYSICAL/CHEMICAL

HYDROLYSIS:	None Known.
PHOTOLYSIS:	None Known.

SECTION 13 - DISPOSAL CONSIDERATIONS

Provide maximum ventilation, only personnel equipped with proper respiratory and skin and eye protection should be permitted in the area. Take up spilled material with sawdust, vermiculite, or other absorbent material and place in containers for disposal.
Waste material must be disposed of in accordance with federal, state, provincial and local environmental control regulations. Empty containers should be recycled by an appropriately licensed reconditioner/salvager or disposed of through a permitted waste management facility. Additional disposal information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

SECTION 14 - TRANSPORTATION INFORMATION

Proper Shipping Name:	NOT AVAILABLE
NOS Technical Name:	NOT AVAILABLE
Hazard Class:	N.A.
Subsidiary Class(es):	N.A.
UN Number:	N.A.
Packing Group:	N.A.

USA - RQ Hazardous Substances:	NOT AVAILABLE
USA-RQ Hazardous Substance Threshold Ship Weight:	NOT AVAILABLE
Marine Pollutant Name:	NOT AVAILABLE

SECTION 15 - REGULATORY INFORMATION

INVENTORY STATUS
U.S. TSCA: This product and/or all of its components are listed on the U.S. TSCA Inventory or is otherwise exempt from TSCA Inventory reporting requirements.
FEDERAL REGULATIONS
US Regulations

Material/ CAS Number	Percent	CERCLA HS - RQ (LBS)	SARA EHS- TPQ (LBS)	SARA 313
ACETONE 67-64-1	10 - 30	5000 lbs	Not Listed	Not Listed
PROPANE 74-98-6	10 - 30	Not Listed	Not Listed	Not Listed
TOLUENE 108-88-3	10 - 30	1000 lbs	Not Listed	Listed
BUTANE 106-97-8	10 - 30	Not Listed	Not Listed	Not Listed
NAPHTHA 64742-89-8	1 - 5	Not Listed	Not Listed	Not Listed
V.M. AND P. NAPHTHA 8032-32-4	1 - 5	Not Listed	Not Listed	Not Listed
[As Rubber solvent (Naphtha)] 8032-32-4	*	Not Listed	Not Listed	Not Listed

SARA 311/312

Health (acute):	Yes
Health (chronic):	No
Fire (flammable):	Yes
Pressure:	Yes
Reactivity:	No

WHMIS HAZARD CLASS: - Class B, Division 6 - Class D, Division 2, Subdivision A

STATE/PROVINCIAL REGULATIONS

CALIFORNIA PROP. 65: WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Additional Information

Key: IARC- International Agency on the Research of Cancer; ACGIH- American Conference of Governmental Industrial Hygienists; NTP- National Toxicology Program *Denotes chemical as NTP Known Carcinogen; + Denotes NTP Possible Carcinogen; OSHA- Occupational Safety and Health Administration.

SECTION 16 - OTHER INFORMATION

Hazard Rating Systems
NFPA Rating: 2 30
HMIS Rating: 2 30

Rating System: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe, *=Chronic Effects.

HMIS=Hazardous Materials Identification System; NFPA=National Fire Protection Association;

Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments and conditions of use.

PREPARED BY: Product Safety Department
REASON FOR REVISION: Date. Edition.
Updated MSDS
format.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200), the supplier notification requirements of SARA Title III, Section 313 and other applicable right-to-know regulations.
Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.
55-624 000000 (00284450.001)(03/09/04)
040308, 000, 0814

*** END OF MSDS ***

27.3 % 0000 1 0814 55-624 ,0814,000 55-624 00003/09/04

M A T E R I A L S A F E T Y D A T A S H E E T

PPG PITTBULL SAFETY BLUE 55-626

1. Product And Company Identification

Supplier
PPG Architectural Finishes, Inc
One PPG Place
Pittsburgh, PA 15272

Company Contact: Technical Service
Telephone Number: 1-800-441-9695
FAX Number: 1-888-807-5123

Manufacturer
Chase Products Co.
19th and Gardner Road
Broadview, IL 60155 USA

Company Contact: Aludia B. Hernandez
Telephone Number: 708-865-1000
FAX Number: 708-865-0923
E-Mail: sales@chaseproducts.com
Web Site: www.chaseproducts.com

Supplier Emergency Contacts & Phone Number
None Given

Manufacturer Emergency Contacts & Phone Number
Chem-Tel: 1-800-255-3924

Issue Date: 03/19/2002

Product Name: PPG PITTBULL SAFETY BLUE 55-626
Chemical Name: 6-6061
CAS Number: Not Established
MSDS Number: 1515
Product Code: 55-626 (429-1367)
Product/Material Uses - Spray Paint

2. Composition/Information On Ingredients

Ingredient Name	CAS Number		Percent Of Total Weight
ACETONE	67-64-1		25 - 30
BUTANE	106-97-8		10 - 20
LIGHT ALIPHATIC NAPHTHA	8032-32-4		1 - 10
PROPANE	74-98-6		15 - 20
TOLUENE	108-88-3		15 - 20
V.M. & P. NAPHTHA	64742-89-8		1 - 10

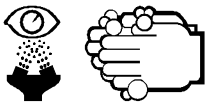
3. Hazards Identification

Primary Routes(s) Of Entry - Ingestion (possible, but considered unlikely), eye contact, skin contact, inhalation.
Eye Hazards - Causes eye irritation.
Skin Hazards - Causes skin irritation.
Ingestion Hazards - This is an aerosol product, ingestion is unlikely to occur. Contains petroleum distillate, harmful if swallowed. If accidentally swallowed, do not induce vomiting. Call physician immediately.
Inhalation Hazards - Deliberate inhalation of concentrate vapor or mist may cause headache, dizziness and nausea..
Chronic/Carcinogenicity Effects - Toluene has been associated with kidney and liver disorders.
Epidemiology - None known
Teratogenicity (Birth Defects) - California's Proposition 65: "Warning: this product contains toluene, a chemical known to the State of California to cause birth defects or other reproductive harm".
Reproductive Effects - Suspect reproductive hazard. Contains material which may cause birth defects, based on animal data. This product contains toluene.
Neurotoxicity - None known
Mutagenicity (Genetic Effect) - None known
Signs And Symptoms - Acute: Prolonged inhalation of vapor or mist may cause headache, dizziness and nausea. Prolonged contact with the skin causes irritation. Irritant to eyes.

3. Hazards Identification - Continued

Conditions Aggravated By Exposure - Pre-existing skin, respiratory, liver and kidney disorders.
Conditions Aggravated By Overexposure - Pre-existing skin, respiratory, liver and kidney disorders.

First Aid (Pictograms)



4. First Aid Measures

Eye - Flush from eyes with plenty of water. If irritation develops, consult a physician.
Skin - Wash skin with soap and water. If irritation develops, consult a physician.
Ingestion - Ingestion from an aerosol product is unlikely to occur. Contains petroleum distillates. Harmful if swallowed. If accidentally swallowed, do not induce vomiting, call physician immediately.
Inhalation - If overcome by vapor move victim to fresh air. Provide artificial respiration if necessary. Consult a physician if injury develops.

5. Fire Fighting Measures

Flash Point: <20 °F
Flash Point Method: estimated
Lower Explosive Limit: Not available
Upper Explosive Limit: Not available

Fire And Explosion Hazards - This product is an aerosol product for which **Flame Projection is 18 in, with flashback.** Temperatures above 120 F may cause cans to burst.
Extinguishing Media - Use CO_2 (Carbon Dioxide), dry chemical, or water fog.
Fire Fighting Instructions - Water spray may be used to cool cans in the vicinity of fire or excessive heat.

6. Accidental Release Measures

Provide adequate ventilation to area being treated. Soak up spills with chemically inert, absorbent material.

Handling & Storage (Pictograms)

7. Handling And Storage

Handling And Storage Precautions - Handle as an extremely flammable material. Store in a cool, dry place away from heat and open flame.
Handling Precautions - Avoid getting spray into eyes. Keep out of reach of children
Storage Precautions - Keep away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors and static electricity).
AEROSOL STORAGE LEVEL III (NFPA-30B)
Work/Hygienic Practices - Wash hands thoroughly after using this product.

Protective Clothing (Pictograms)

8. Exposure Controls/Personal Protection

Engineering Controls - Use with adequate general and local exhaust ventilation.
Eye/Face Protection - Conventional eyeglasses to guard against splashing.
Skin Protection - Rubber, vinyl or household type gloves.
Respiratory Protection - Use in well-ventilated area ONLY. NOTICE: Reports have associated repeated and prolonged occupational over exposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. To avoid breathing vapor or spray mist, open windows and doors or use other means to ensure fresh air entry during application and drying. If you experience eye watering, headaches, or dizziness, increase fresh air or use an appropriate, properly fitted respirator (NIOSH approved), or leave the area. NOTE: Follow respirator manufacturer's instructions carefully.

Ingredient(s) - Exposure Limits

ACETONE
ACGIH TLV-STEL 750 ppm ; ACGIH TLV-TWA 500 ppm ; OSHA PEL-TWA 1,000 ppm
BUTANE
ACGIH TLV-TWA 800 ppm
LIGHT ALIPHATIC NAPHTHA
OSHA PEL 400ppm ; ACGIH TLV 300ppm
PROPANE
ACGIH TLV-TWA 2500 ppm ; OSHA PEL-TWA 1,000 ppm
TOLUENE
ACGIH TLV-TWA 50 ppm (Skin) ; OSHA PEL-CEILING 300 ppm ; OSHA PEL-PEAK 500 ppm
OSHA PEL-TWA 200 ppm
V.M. & P. NAPHTHA
ACGIH TLV-TWA 300 ppm

9. Physical And Chemical Properties

Appearance - Appearance of paint.
Odor - Paint odor.

Chemical Type: Mixture
Physical State: Liquid
Melting Point: Not applicable °F Not applicable °C
Boiling Point: Acetone 133 °F Acetone 56 °C
Specific Gravity: 0.868
Percent VOCs: 56.06
Solubility: Insoluble
Evaporation Rate: Faster than butyl acetate

10. Stability And Reactivity

Stability: Stable
Hazardous Polymerization: Will not occur

Conditions To Avoid (Stability) - Temperatures above 120 F
Incompatible Materials - Avoid heat, open flame and contact with strong oxidizers.
Hazardous Decomposition Products - Thermal decomposition may yield gases like carbon monoxide and carbon

10. Stability And Reactivity - Continued

dioxide.
Conditions To Avoid (Polymerization) - Temperatures above 120 F

11. Toxicological Information

No Data Available...

12. Ecological Information

No Data Available...

13. Disposal Considerations

Wrap empty container in newspaper and dispose of it in non-incinerated trash only.

14. Transport Information

Proper Shipping Name - ORM-D Consumer Commodity

DOT Identification Number
UN1950

DOT Shipping Label
Aerosol Consumer Commodity

15. Regulatory Information

U.S. Regulatory Information - All ingredients of this product are listed or are excluded from listing under the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

SARA Hazard Classes
Acute Health Hazard; Chronic Health Hazard; Fire Hazard

SARA Title III - Section 313 Form "R"/TRI Reportable Chemical

SARA Section 313 Notification - This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372. This information must be included in all MSDSs that are copied and distributed for this material. This product contains: Toluene. See section 2 for % amount in the product.

Ingredient(s) - U.S. Regulatory Information
TOLUENE
SARA Title III - Section 313 Form "R"/TRI Reportable Chemical; SARA - Acute Health Hazard; SARA - Chronic Health Hazard; SARA - Fire Hazard

Ingredient(s) - State Regulations
ACETONE
New Jersey - Workplace Hazard; Pennsylvania - Workplace Hazard; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

BUTANE
New Jersey - Workplace Hazard; New Jersey - Environmental Hazard; New Jersey - Special Hazard; Pennsylvania - Workplace Hazard; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

PROPANE
New Jersey - Workplace Hazard; New Jersey - Environmental Hazard; New Jersey - Special Hazard; Pennsylvania - Workplace Hazard; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

15. Regulatory Information - Continued

Ingredient(s) - State Regulations - Continued

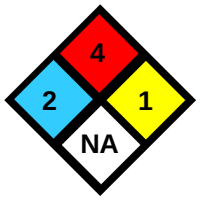
TOLUENE

New Jersey - Workplace Hazard; New Jersey - Environmental Hazard; New Jersey - Special Hazard; Pennsylvania - Workplace Hazard; Pennsylvania - Environmental Hazard; California - Proposition 65; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

V.M. & P. NAPHTHA

New Jersey - Workplace Hazard; Pennsylvania - Workplace Hazard; New York City - Hazardous Substance

NFPA



HMIS

HEALTH	*2
FLAMMABILITY	4
REACTIVITY	1
PERSONAL PROTECTION	B

16. Other Information

Revision/Preparer Information

MSDS Preparer: Laura E. Radevski
MSDS Preparer Phone Number: 708-865-1000
This MSDS Supercedes A Previous MSDS Dated: 12/17/2001

Disclaimer

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitablility of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purposes(s).

PPG Architectural Finishes, Inc

Printed Using MSDS Generator™ 2000

M A T E R I A L S A F E T Y D A T A S H E E T

55-640 PITTBULL HIGHWAY YELLOW STRIPING

1. Product And Company Identification

Supplier
PPG Architectural Finishes, Inc
One PPG Place
Pittsburgh, PA 15272

Company Contact: Technical Service
Telephone Number: 1-800-441-9695
FAX Number: 1-888-807-5123

Manufacturer
Chase Products Co.
19th and Gardner Road
Broadview, IL 60155 USA

Company Contact: Aludia B. Hernandez
Telephone Number: 708-865-1000
FAX Number: 708-865-0923
E-Mail: sales@chaseproducts.com
Web Site: www.chaseproducts.com

Supplier Emergency Contacts & Phone Number
None Given

Manufacturer Emergency Contacts & Phone Number
Chem-Tel: 1-800-255-3924

Issue Date: 04/17/2002

Product Name: 55-640 PITTBULL HIGHWAY YELLOW STRIPING
Chemical Name: 6-5939
CAS Number: Not Established
MSDS Number: 1543
Product Code: 55-640 (429-1375)
Product/Material Uses - Spray Paint

2. Composition/Information On Ingredients

Ingredient Name	CAS Number		Percent Of Total Weight
ACETONE	67-64-1		10 - 15
BUTANE	106-97-8		5 - 15
BUTYL BENZYL PHTHALATE	85-68-7		1 - 10
HEAVY AROMATIC NAPHTHA	64742-94-5		1 - 10
ISOPROPYL ALCOHOL	67-63-0		5 - 15
PROPANE	74-98-6		15 - 20
V.M. & P. NAPHTHA	64742-89-8		20 - 25

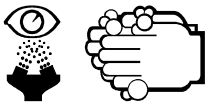
3. Hazards Identification

Primary Routes(s) Of Entry - Ingestion (possible, but considered unlikely), eye contact, skin contact, inhalation.
Eye Hazards - Causes eye irritation.
Skin Hazards - Causes skin irritation.
Ingestion Hazards - This is an aerosol product, ingestion is unlikely to occur. Contains petroleum distillate, harmful if swallowed. If accidentally swallowed, do not induce vomiting. Call physician immediately.
Inhalation Hazards - Deliberate inhalation of concentrate vapor or mist may cause headache, dizziness and nausea..
Chronic/Carcinogenicity Effects - Xylene has been associated with kidney and liver disorders. Contains less than 1% xylene. Contains less than 0.1% ethylbenzene; IARC has evaluated and classified ethylbenzene as a possible human carcinogen (group 2B) based on sufficient evidence of carcinogenicity in animals, but inadequate evidence for cancer in exposed humans.
Epidemiology - None known
Neurotoxicity - None known
Mutagenicity (Genetic Effect) - None known
Signs And Symptoms - Acute: Prolonged inhalation of vapor or mist may cause headache, dizziness and nausea. Prolonged contact with the skin causes irritation. Irritant to eyes.
Conditions Aggravated By Exposure - Pre-existing skin, respiratory, liver and kidney disorders.

3. Hazards Identification - Continued

Conditions Aggravated By Overexposure - Pre-existing skin, respiratory, liver and kidney disorders.

First Aid (Pictograms)



4. First Aid Measures

Eye - Flush from eyes with plenty of water. If irritation develops, consult a physician.
Skin - Wash skin with soap and water. If irritation develops, consult a physician.
Ingestion - Ingestion from an aerosol product is unlikely to occur. Contains petroleum distillates. Harmful if swallowed. If accidentally swallowed, do not induce vomiting, call physician immediately.
Inhalation - If overcome by vapor move victim to fresh air. Provide artificial respiration if necessary. Consult a physician if injury develops.

5. Fire Fighting Measures

Flash Point: < 20 °F
Flash Point Method: estimated
Lower Explosive Limit: Not available
Upper Explosive Limit: Not available

Fire And Explosion Hazards - This product is an aerosol product for which **Flame Projection is 18 in, with flashback.** Temperatures above 120 F may cause cans to burst.
Extinguishing Media - Use CO_2 (Carbon Dioxide), dry chemical, or water fog.
Fire Fighting Instructions - Water spray may be used to cool cans in the vicinity of fire or excessive heat.

6. Accidental Release Measures

Provide adequate ventilation to area being treated. Soak up spills with chemically inert, absorbent material.

Handling & Storage (Pictograms)

7. Handling And Storage

Handling And Storage Precautions - Handle as an extremely flammable material. Store in a cool, dry place away from heat and open flame.
Handling Precautions - Avoid getting spray into eyes. Keep out of reach of children.
Storage Precautions - Keep away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors and static electricity).
AEROSOL STORAGE LEVEL III (NFPA-30B)
Work/Hygienic Practices - Wash hands thoroughly after using this product.

7. Handling And Storage - Continued

Protective Clothing (Pictograms)

8. Exposure Controls/Personal Protection

Engineering Controls - Use with adequate general and local exhaust ventilation.
Eye/Face Protection - Conventional eyeglasses to guard against splashing.
Skin Protection - Rubber, vinyl or household type gloves.
Respiratory Protection - Use in well-ventilated area ONLY. NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. To avoid breathing vapor or spray mist, open windows and doors or use other means to ensure fresh air entry during application and drying. If you experience eye watering, headaches, or dizziness, increase fresh air or use an appropriate, properly fitted respirator (NIOSH approved), or leave the area. NOTE: Follow respirator manufacture's instructions carefully.

Ingredient(s) - Exposure Limits

ACETONE
ACGIH TLV-STEL 750 ppm ; ACGIH TLV-TWA 500 ppm ; OSHA PEL-TWA 1,000 ppm
BUTANE
ACGIH TLV-TWA 800 ppm
HEAVY AROMATIC NAPHTHA
OSHA PEL 100 ppm
ISOPROPYL ALCOHOL
ACGIH TLV-STEL 500 ppm (Notice of Intended Change) ; ACGIH TLV-STEL 400 ppm (Proposed) ; ACGIH TLV-TWA 400 ppm (Notice of Intended Change)
ACGIH TLV-TWA 200 ppm (Proposed) ; OSHA PEL-TWA 400 ppm
PROPANE
ACGIH TLV-TWA 2500 ppm ; OSHA PEL-TWA 1,000 ppm
V.M. & P. NAPHTHA
ACGIH TLV-TWA 300 ppm

9. Physical And Chemical Properties

Appearance - Appearance of paint.
Odor - Paint odor.

Chemical Type: Mixture
Physical State: Liquid
Melting Point: Not applicable °F Not applicable °C
Boiling Point: VM & P Naphtha 240 - 285 °F VM & P Naphtha 115.6 - 140.6 °C
Specific Gravity: 0.952
Percent VOCs: 49.80
Solubility: Insoluble
Evaporation Rate: Faster than butyl acetate

10. Stability And Reactivity

Stability: Stable
Hazardous Polymerization: Will not occur

Conditions To Avoid (Stability) - Temperatures above 120 F

10. Stability And Reactivity - Continued

Incompatible Materials - Avoid heat, open flame and contact with strong oxidizers.
Hazardous Decomposition Products - Thermal decomposition may yield gases like carbon monoxide and carbon dioxide.
Conditions To Avoid (Polymerization) - Temperatures above 120 F

11. Toxicological Information

No Data Available...

12. Ecological Information

No Data Available...

13. Disposal Considerations

Wrap empty container in newspaper and dispose of it in non-incinerated trash only.

14. Transport Information

Proper Shipping Name - ORM-D Consumer Commodity

DOT Identification Number
UN1950

DOT Shipping Label
Aerosol Consumer Commodity

15. Regulatory Information

U.S. Regulatory Information - All ingredients of this product are listed or are excluded from listing under the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

SARA Hazard Classes
Acute Health Hazard; Chronic Health Hazard; Fire Hazard

SARA Section 313 Notification - This product does not contain any toxic chemicals (above the *de minimis* level) subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372. This information must be included in all MSDSs that are copied and distributed for this material.

Ingredient(s) - State Regulations
ACETONE
New Jersey - Workplace Hazard; Pennsylvania - Workplace Hazard; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

BUTANE
New Jersey - Workplace Hazard; New Jersey - Environmental Hazard; New Jersey - Special Hazard; Pennsylvania - Workplace Hazard; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

BUTYL BENZYL PHTHALATE
New Jersey - Workplace Hazard; New Jersey - Environmental Hazard; Pennsylvania - Workplace Hazard; Pennsylvania - Environmental Hazard; New York City - Hazardous Substance

ISOPROPYL ALCOHOL
New Jersey - Workplace Hazard; New Jersey - Special Hazard; Pennsylvania - Workplace Hazard; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

PROPANE

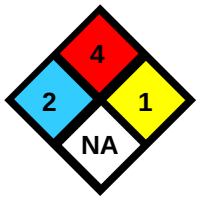
15. Regulatory Information - Continued

Ingredient(s) - State Regulations - Continued

New Jersey - Workplace Hazard; New Jersey - Environmental Hazard; New Jersey - Special Hazard; Pennsylvania - Workplace Hazard; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

V.M. & P. NAPHTHA
New Jersey - Workplace Hazard; Pennsylvania - Workplace Hazard; New York City - Hazardous Substance

NFPA



HMIS

HEALTH	*2
FLAMMABILITY	4
REACTIVITY	1
PERSONAL PROTECTION	B

16. Other Information

Revision/Preparer Information

MSDS Preparer: Laura E. Radevski
MSDS Preparer Phone Number: 708-865-1000

Disclaimer

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitablility of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purposes(s).

PPG Architectural Finishes, Inc

Printed Using MSDS Generator™ 2000

Material Safety Data Sheet

Date of issue 15 May 2009
Version 10

1 . Product and company identification

Product name : PREMIUM EXT SATIN WHITE

Code : 76-45

Supplier : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)

Technical Phone Number : 1-800-441-9695 (8:00 am to 5:00 pm EST)

2 . Hazards identification

Emergency overview : WARNING!

CAUSES RESPIRATORY TRACT AND EYE IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION. MAY BE HARMFUL IF INHALED OR SWALLOWED. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

Do not get on skin or clothing. Avoid breathing vapor or mist. Avoid contact with eyes. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled. Irritating to respiratory system. Can irritate eyes, nose, mouth and throat.

Ingestion : May be harmful if swallowed.

Skin : May cause skin dryness and irritation. May cause an allergic skin reaction.

Eyes : Irritating to eyes.

Over-exposure signs/symptoms

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Ingestion : No specific data.

Skin : Adverse symptoms may include the following:
irritation
redness
dryness
cracking

Eyes : Adverse symptoms may include the following:
pain or irritation
watering
redness

Medical conditions aggravated by over-exposure : Pre-existing skin disorders and disorders involving any other target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

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2 . Hazards identification

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See toxicological information (section 11)

3 . Composition/information on ingredients

Name	CAS number	%
titanium dioxide	13463-67-7	10 - 30
ethanediol	107-21-1	1 - 5
PETROLEUM DERIVATIVES	Not available.	0.5 - 1.5
2-octyl-2H-isothiazol-3-one	26530-20-1	0.1 - 1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do not use solvents or thinners.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous combustion products : Decomposition products may include the following materials:
carbon oxides
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

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6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not swallow. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store below the following temperature: 32F / 0C.

8 . Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
titanium dioxide	TWA	10 mg/m³	15 mg/m³ TD	10 mg/m³ TD	10 mg/m³ (as Ti)	Not established
	STEL	Not established	Not established	Not established	20 mg/m³ (as Ti)	Not established
ethanediol	STEL	100 mg/m³ C	Not established	100 mg/m³ C	100 mg/m³ C	Not established
PETROLEUM DERIVATIVES	TWA	Not	5 MG/M3	Not	Not	Not

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8 . Exposure controls/personal protection

	STEL	established Not established	10 MG/M3	established Not established	established Not established	established Not established

Key to abbreviations

A	=	Acceptable Maximum Peak	S	=	Potential skin absorption
ACGIH	=	American Conference of Governmental Industrial Hygienists.	SR	=	Respiratory sensitization
C	=	Ceiling Limit	SS	=	Skin sensitization
F	=	Fume	TD	=	Total dust
IPEL	=	Internal Permissible Exposure Limit	TLV	=	Threshold Limit Value
OSHA	=	Occupational Safety and Health Administration.	TWA	=	Time Weighted Average
R	=	Respirable	Z	=	OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes : Safety glasses with side shields.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Gloves : butyl rubber

Respiratory : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

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9 . Physical and chemical properties

Physical state	:	Liquid.
Flash point	:	Closed cup: >93.33°C (>200°F)
Color	:	Not available.
Odor	:	Not available.
pH	:	Not available.
Boiling/condensation point	:	37.22 to 37.22°C (99 to 99°F)
Melting/freezing point	:	Not available.
Specific gravity	:	1.2
Density (lbs / gal)	:	10.01
Vapor pressure	:	2.3 kPa (17.3 mm Hg)
Vapor density	:	Not available.
Volatility	:	68% (v/v), 57.99% (w/w)
Odor threshold	:	Not available.
Evaporation rate	:	34 (Butyl acetate. = 1)
Octanol/water partition coefficient	:	Not available.
% Solid. (w/w)	:	42.01

10 . Stability and reactivity

Stability	:	Stable under recommended storage and handling conditions (see section 7).
Conditions to avoid	:	No specific data.
Materials to avoid	:	Reactive or incompatible with the following materials:,acids
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization	:	Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
titanium dioxide	LD50 Oral	Rat	>10 g/kg	-
ethanediol	LD50 Oral	Rat	4700 mg/kg	-
	LD50 Dermal	Rabbit	9.53 g/kg	-
2-octyl-2H-isothiazol-3-one	LD50 Oral	Rat	0.55 g/kg	-
	LD50 Dermal	Rabbit	0.69 g/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Defatting irritant? : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Target organs : Contains material which causes damage to the following organs: kidneys.
Contains material which may cause damage to the following organs: lungs, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.

Carcinogenicity

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11 . Toxicological information

Conclusion/Summary : Not available.

Carcinogenicity : Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
titanium dioxide	A4	2B	-	-	-	-
ethanediol	A4	-	-	-	-	-

Mutagenicity

Conclusion/Summary : Not available.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity

Conclusion/Summary : Not available.

Teratogenicity : Contains material which may cause birth defects, based on animal data.

Reproductive toxicity

Conclusion/Summary : Not available.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
titanium dioxide	Acute LC50 5.5 ppm Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 1 ppm Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
ethanediol	Acute LC50 8050000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
	Acute LC50 >10000000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 6090000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
2-octyl-2H-isothiazol-3-one	Acute LC50 47 to 52 ppb Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours
	Acute LC50 160 to 188 ppb Marine water	Fish - Sheepshead minnow - Cyprinodon variegatus	96 hours
	Acute EC50 180 to 240 ppb Fresh water	Daphnia - Water flea - Daphnia magna	48 hours

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13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14 . Transport information

Regulation	UN number	Proper shipping name	Classes	PG*	Additional information
UN	None.	Not regulated.	None.	-	-
IMDG	None.	Not regulated.	None.	-	-
DOT	None.	Not regulated.	Not available.	-	-

PG* : Packing group

Reportable quantity RQ : CERCLA: Hazardous substances.: ethanediol: 5000 lbs. (2270 kg);

15 . Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.

Australia inventory (AICS) : All components are listed or exempted.

Canada inventory : All components are listed or exempted.

China inventory (IECSC) : All components are listed or exempted.

Europe inventory : This product contains a component which may restrict import to the notifier and/or to other parties holding a concurrent notification or agreement.

Japan inventory (ENCS) : At least one component is not listed.

Korea inventory (KECI) : All components are listed or exempted.

New Zealand : Not determined.

Philippines inventory (PICCS) : All components are listed or exempted.

United States

U.S. Federal regulations : TSCA 12(b) annual export notification: No products were found.
TSCA 12(b) one-time export: No products were found.

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: titanium dioxide; ethanediol
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: titanium dioxide: Immediate (acute) health hazard; ethanediol: Immediate (acute) health hazard, Delayed (chronic) health hazard
CERCLA: Hazardous substances.: ethanediol: 5000 lbs. (2270 kg);

SARA 313	Product name	CAS number	Concentration
Form R - Reporting requirements :	ethanediol	107-21-1	1 - 5

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15 . Regulatory information

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

Canada

WHMIS (Canada) : Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

Mexico

Classification

Flammability : 1 **Health** : 2 **Reactivity** : 0

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 2 * **Flammability** : 1 **Physical hazards** : 0

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 2 **Flammability** : 1 **Instability** : 0

Date of previous issue : **No previous validation.**

Organization that prepared the MSDS : EHS

◤ **Indicates information that has changed from previously issued version.**

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

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MATERIAL SAFETY DATA SHEET

COATINGS AND RESINS GROUP

PPG Industries, Inc.

SECTION 1 - CHEMICAL, PRODUCT, AND COMPANY INFORMATION

PRODUCT CODE/IDENTITY: 76-110

REVISION DATE: 12/16/97 (000) 0872

CUSTOMER PART #/NAME: Not applicable

PRODUCT TRADE NAME: EXTERIOR LATEX SATIN

CHEMICAL FAMILY: Acrylic

EMERGENCY MEDICAL/SPILL INFO: (304) 843-1300 (U.S.) 91-800-00-214 (MEXICO)

TECHNICAL INFORMATION: 1-800-441-9695

PRODUCT SAFETY/MSDS INFORMATION: 4325 ROSANNA DRIVE, P.O. BOX 9 ALLISON PARK, PA 15101 (412) 492-5555

DATE OF MSDS PREPARATION: 04/25/98

PRIMARY HAZARD WARNING

Harmful if swallowed. May cause slight skin irritation. Causes eye irritation. Prolonged or repeated contact may cause an allergic skin reaction. Vapor and/or spray mist may be harmful if inhaled.

THIS MATERIAL SAFETY DATA SHEET HAS BEEN PREPARED IN ACCORDANCE WITH THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200), THE SUPPLIER NOTIFICATION REQUIREMENTS OF SARA TITLE III, SECTION 313, AND OTHER APPLICABLE RIGHT-TO-KNOW REGULATIONS.

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

REF	HAZARDOUS INGREDIENTS	PERCENT	CAS NUMBER	CARCINOGEN*
01	ETHYLENE GLYCOL	1 - <5	107-21-1	
02	TITANIUM DIOXIDE	10- <20	13463-67-7	
03	SILICA CRISTOBALLITE	0.1- <1	14464-46-1	I N O
04	ALUMINUM HYDROXIDE	1 - <5	21645-51-2	
05	OCTYLISOTHIAZOLONE	0.1- <1	26530-20-1	
06	SILICA	1 - <5	7631-86-9	

* Carcinogens: O=OSHA; A=ACGIH; N=NTP; I=IARC

SARA TITLE III & CERCLA CLASSIFICATIONS

REF	SARA 102 RQ (LBS)	SARA 302 TPQ (LBS)	SARA 313	SARA 311/312 AC	CH	FL	PR	RE
01	5000	NOT ESTAB	Y	Y	Y	N	N	N
02	NOT ESTAB	NOT ESTAB	N	N	N	N	N	N

03	NOT ESTAB	NOT ESTAB	N	N	Y	N	N	N
04	NOT ESTAB	NOT ESTAB	N	N	N	N	N	N
05	NOT ESTAB	NOT ESTAB	N	Y	N	N	N	N
06	NOT ESTAB	NOT ESTAB	N	N	N	N	N	N

SARA 311/312 CATEGORIES FOR THIS PRODUCT: ACUTE= Y, CHRONIC= Y, FLAMMABILITY= N, PRESSURE= N, REACTIVITY= N

OCCUPATIONAL EXPOSURE LIMITS HAVE BEEN ESTABLISHED FOR THE FOLLOWING MATERIALS:

	ACGIH			U.S. OSHA	
REF	TLV-TWA	TLV-STEL		PEL-TWA	PEL-STEL
01	C- 100 mg/m3	NOT ESTAB.	C-	50 ppm	NOT ESTAB.
02	10 mg/m3	NOT ESTAB.		10 mg/m3	NOT ESTAB.
03	R- 0.05 mg/m3	NOT ESTAB.	R-	0.05 mg/m3	NOT ESTAB.
04	2 mg/m3	NOT ESTAB.	R-	5 mg/m3	NOT ESTAB.
05	NOT ESTAB.	NOT ESTAB.		NOT ESTAB.	NOT ESTAB.
06	10 mg/m3	NOT ESTAB.		6 mg/m3	NOT ESTAB.

[C- Ceiling Limit; S- Potential Skin Absorption; R- Respirable Dust] [NOT ESTAB. = NOT ESTABLISHED = NOT APPLICABLE]

PRODUCT STATUS RELATIVE TO THE U.S. EPA TOXIC SUBSTANCES CONTROL ACT

All chemical substances in this product are listed on the U.S. TSCA Inventory or are otherwise exempt from TSCA Inventory reporting requirements.

SECTION 3 - HAZARDS IDENTIFICATION

EFFECTS OF OVEREXPOSURE FROM:

INGESTION: Harmful if swallowed.

EYE CONTACT: Causes eye irritation.

SKIN CONTACT: May cause slight skin irritation. Prolonged or repeated contact may cause an allergic skin reaction.

INHALATION: Vapor and/or spray mist may be harmful if inhaled.

CHRONIC OVEREXPOSURE: Avoid long-term and repeated contact. This product contains crystalline silica which has been classified as a human carcinogen by IARC. Long-term exposures may also lead to a disabling lung condition known as silicosis. The risk depends on the duration and level of exposure to dust from sanding surfaces or mist from spray applications. Use of appropriate personal protective equipment and/or engineering controls should be employed whenever these types of operations are being performed. Ingestion of products containing ethylene glycol may damage kidneys and liver and has been shown to cause birth defects in laboratory animals. No evidence of these effects has been found in humans. This product either contains formaldehyde or is capable of releasing formaldehyde above 0.5 ppm under certain conditions. Formaldehyde is a potential cancer hazard, a skin sensitizer and a respiratory sensitizer. This product contains titanium dioxide. Animals inhaling massive quantities of titanium dioxide dust in a long-term study developed lung tumors. Studies with humans involved in manufacture of this pigment indicate no increased risk of cancer from exposure. Potential for inhalation of titanium dioxide dusts from coatings is very limited. Since overexposures are not expected, there is no significant

hazard for man.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: Redness, itching, burning sensation and visual disturbances may indicate excessive eye contact. Dryness, itching, cracking, burning, redness, and swelling are conditions associated with excessive skin contact.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not applicable.

WARNING: This product contains a chemical known to the State of California to cause cancer.

SECTION 4 - FIRST AID MEASURES

INGESTION: If swallowed, do not induce vomiting. Gently wipe out inside mouth to remove any residual material.

EYE CONTACT: In case of eye contact, remove contact lenses and flush eyes immediately with a gentle stream of luke warm water for at least 15 minutes.

SKIN CONTACT: In case of skin contact, flush immediately with plenty of water for at least 15 minutes followed by washing with soap and water.

INHALATION: If affected by inhalation of vapor or spray mist, remove to fresh air. Apply artificial respiration and other support measures as required.

OTHER: If ingestion, any type of overexposure or symptoms of overexposure occur during or following the use of this product, contact a poison control center, emergency room or physician immediately; have Material Safety Data Sheet information available.

SECTION 5 - FIRE FIGHTING MEASURES

FLASHPOINT: Not applicable

FLAMMABLE LIMITS: Lower explosion limit (LEL): Not available

Upper explosion limit (UEL): Not available

EXTINGUISHING MEDIA: Use extinguishers appropriate for surrounding fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep this product away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors, static electricity). Invisible vapors can travel to a source of ignition and flash back. Do not smoke while using this product. Keep containers tightly closed when not in use. Closed containers may explode when overheated. Do not apply to hot surfaces. Toxic gases may form when this product comes in contact with extreme heat.

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be ineffective. Water spray may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable. Fire-fighters should wear self-contained breathing apparatus and full protective clothing.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Provide maximum ventilation. Only personnel equipped with proper respiratory, skin, and eye protection should be permitted in the area. Remove all sources of ignition. Take up spilled material with sand, vermiculite, or other noncombustible absorbent material and place in clean, empty containers for disposal. Only the spilled material and the absorbant should be placed in this container.

WASTE DISPOSAL METHOD: Waste material must be disposed of in accordance with federal, state, provincial, and local environmental control regulations. Empty containers should be recycled or disposed of through an approved waste management facility.

SECTION 7 - HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS: Do not store above 120 degrees F. (48 degrees C.).

OTHER PRECAUTIONS: Vapors may collect in low areas. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts. Containers should be grounded when pouring. Avoid free fall of liquids in excess of a few inches.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT FOR:

EYE PROTECTION: Wear safety glasses.

SKIN PROTECTION: Wear protective clothing to prevent skin contact. Apron and gloves should be constructed of: impermeable material. No specific permeation/degradation testing have been done on protective clothing for this product. Recommendations for skin protection are based on infrequent contact with this product. For frequent contact or total immersion, contact a manufacturer of protective clothing for appropriate chemical impervious equipment.

RESPIRATORY PROTECTION: Where ventilation is inadequate, use a NIOSH- approved air purifying respirator with the appropriate chemical cartridges or positive-pressure, air-supplied respirator. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used.

OTHER EQUIPMENT: Clean contaminated clothing and shoes.

VENTILATION REQUIREMENTS: Provide general dilution or local exhaust ventilation in volume and pattern to keep the concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

[FORMULA VALUES, NOT SALES SPECIFICATIONS]

BOILING RANGE: 205- 475Degrees F

SOLUBILITY IN WATER: 58.6 %

VAPOR PRESSURE: 17.2 mmHg

WEIGHT/GALLON (LBS): 9.80 (U.S.)

VAPOR DENSITY: Heavier than air

pH: Not applicable

% VOLATILE/VOLUME: 68.290

% SOLIDS BY WEIGHT: 40.94

SPECIFIC GRAVITY: 1.176

EVAPORATION RATE(BuOAc=100): 33

ODOR/APPEARANCE: Viscous liquid with an odor characteristic of the solvents listed in Section 2.

SECTION 10 - STABILITY AND REACTIVITY

This product is normally stable and will not undergo hazardous reactions.

INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID): Avoid contact with strong alkalies, strong mineral acids, or strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: May produce the following hazardous decomposition products when exposed to extreme heat: oxides of aluminum ; carbon monoxide ; carbon dioxide ; lower molecular weight polymer fractions; Extreme heat includes, but is not limited to, flame cutting, brazing, and welding.

Hazardous Materials Identification System (HMIS) and National Fire Protection Association (NFPA) Ratings:

HMIS Rating		NFPA Rating	
HEALTH	2*	HEALTH	2
FLAMMABILITY	1	FLAMMABILITY	1
REACTIVITY	0	INSTABILITY	0

Rating System:0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe, *=Chronic Effects.

Safe handling of this product requires that all of the information on the MSDS be evaluated for specific work environments and conditions of use.

THIS IS THE END OF THE MSDS FOR: 76-110 (00102705.00276-110)

Manufactured and Supplied by:

ARCHITECTUAL FINISHES, INC.

ONE PPG PLACE

PITTSBURGH, PA 15272

Material Safety Data Sheet

Date of issue 3 August 2009
Version 33.36

1 . Product and company identification

Product name : PITT-TECH SATIN ACRYLIC ENAMEL

Code : 90-474

Supplier : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)

Technical Phone Number : (412) 492-5200 (ALLISON PARK, PA) 8:00 a.m. - 5:00 p.m. EST

2 . Hazards identification

Emergency overview : WARNING!

HARMFUL IF ABSORBED THROUGH SKIN. CAUSES RESPIRATORY TRACT AND EYE IRRITATION. MAY BE HARMFUL IF INHALED OR SWALLOWED. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

Do not breathe vapor or mist. Do not get in eyes or on skin or clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled. Severely irritating to the respiratory system. Can irritate eyes, nose, mouth and throat.

Ingestion : May be harmful if swallowed.

Skin : Toxic in contact with skin.

Eyes : Irritating to eyes.

Over-exposure signs/symptoms

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Ingestion : No specific data.

Skin : No specific data.

Eyes : Adverse symptoms may include the following:
pain or irritation
watering
redness

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See toxicological information (section 11)

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3 . Composition/information on ingredients

Name	CAS number	%
titanium dioxide	13463-67-7	10 - 30
Talc (Mg3H2(SiO3)4)	14807-96-6	7 - 13
2-(2-butoxyethoxy)ethanol	112-34-5	7 - 13
2-(2-methoxyethoxy)ethanol	111-77-3	3 - 7
Silicic acid	1343-98-2	1 - 5

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do not use solvents or thinners.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous combustion products : Decomposition products may include the following materials:
carbon oxides
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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6 . Accidental release measures

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Do not breathe vapor or mist. Do not swallow. Do not get in eyes or on skin or clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store below the following temperature: 32F / 0C.

8 . Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
titanium dioxide	TWA	10 mg/m³	15 mg/m³ TD	10 mg/m³ TD	10 mg/m³ (as Ti)	Not established
	STEL	Not established	Not established	Not established	20 mg/m³ (as Ti)	Not established
Talc (Mg3H2(SiO3)4)	TWA	2 mg/m³ R	20 mppcf Z	2 f/cc 2 mg/m³ R TD	2 mg/m³	Not established
	STEL	Not established	1 f/cc Z	Not established	Not established	Not established
2-(2-butoxyethoxy)ethanol	TWA	Not established	Not established	Not established	Not established	35 ppm
2-(2-methoxyethoxy)ethanol	TWA	Not established	Not established	Not established	Not established	30 ppm

Key to abbreviations

A	= Acceptable Maximum Peak	S	= Potential skin absorption
ACGIH	= American Conference of Governmental Industrial Hygienists.	SR	= Respiratory sensitization
C	= Ceiling Limit	SS	= Skin sensitization
F	= Fume	TD	= Total dust
IPEL	= Internal Permissible Exposure Limit	TLV	= Threshold Limit Value

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8 . Exposure controls/personal protection

OSHA = Occupational Safety and Health Administration.
R = Respirable
TWA = Time Weighted Average
Z = OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes : Safety glasses with side shields.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Respiratory : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state : Liquid.
Flash point : Closed cup: >93.33°C (>200°F)
Explosion limits : Lower: 9.9%
Color : Not available.
Odor : Not available.
pH : Not available.
Boiling/condensation point : >37.78°C (>100°F)
Melting/freezing point : Not available.
Specific gravity : 1.22
Density (lbs / gal) : 10.18
Vapor pressure : 2.3 kPa (17.5 mm Hg)
Vapor density : Not available.
Volatility : 62% (v/v), 50.11% (w/w)
Odor threshold : Not available.
Evaporation rate : 31 (butyl acetate = 1)

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9 . Physical and chemical properties

Octanol/water partition coefficient : Not available.

% Solid. (w/w) : 49.89

10 . Stability and reactivity

Stability : The product may not be stable under certain conditions of storage or use.

Conditions to avoid : No specific data.

Materials to avoid : Reactive or incompatible with the following materials:,acids

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
titanium dioxide	LD50 Oral	Rat	>10 g/kg	-
2-(2-butoxyethoxy)ethanol	LD50 Oral	Rat	4500 mg/kg	-
	LD50 Dermal	Rabbit	2700 mg/kg	-
2-(2-methoxyethoxy)ethanol	LD50 Oral	Rat	4 mL/kg	-
	LD50 Dermal	Rabbit	0.65 g/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Target organs : Contains material which causes damage to the following organs: lungs, skin, central nervous system (CNS).
Contains material which may cause damage to the following organs: liver, cardiovascular system, upper respiratory tract, eyes.

Carcinogenicity

Conclusion/Summary : Not available.

Carcinogenicity : Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
titanium dioxide	A4	2B	-	-	-	-
Talc (Mg3H2(SiO3)4)	A4	3	-	-	-	-

Mutagenicity

Conclusion/Summary : Not available.

Mutagenicity : Contains material which may cause heritable genetic effects, based on animal data.

Teratogenicity

Conclusion/Summary : Not available.

Teratogenicity : Contains material which may cause birth defects, based on animal data.

Reproductive toxicity

Conclusion/Summary : Not available.

Developmental effects : Contains material which may cause developmental abnormalities, based on animal data.

Fertility effects : No known significant effects or critical hazards.

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12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
titanium dioxide	Acute LC50 5.5 ppm Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 1 ppm Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
2-(2-butoxyethoxy)ethanol	Acute LC50 1300000 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus	96 hours
2-(2-methoxyethoxy)ethanol	Acute LC50 7500000 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus	96 hours

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14 . Transport information

Regulation	UN number	Proper shipping name	Classes	PG*	Additional information
UN	None.	Not regulated.	None.	-	-
IMDG	None.	Not regulated.	None.	-	-
DOT	None.	Not regulated.	Not available.	-	-

PG* : Packing group

Reportable quantity RQ : CERCLA: Hazardous substances.: 2-(2-butoxyethoxy)ethanol; 2-(2-methoxyethoxy)ethanol;

15 . Regulatory information

United States inventory (TSCA 8b) : At least one component is not listed.
Australia inventory (AICS) : At least one component is not listed.
Canada inventory : At least one component is not listed.
China inventory (IECSC) : At least one component is not listed.
Europe inventory : At least one component is not listed.
Japan inventory (ENCS) : At least one component is not listed.
Korea inventory (KECI) : At least one component is not listed.
New Zealand : Not determined.
Philippines inventory (PICCS) : At least one component is not listed.

United States

U.S. Federal regulations : TSCA 12(b) annual export notification: No products were found.
TSCA 12(b) one-time export: No products were found.

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15 . Regulatory information

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: 2-(2-butoxyethoxy)ethanol; Talc (Mg3H2(SiO3)4); titanium dioxide; 2-(2-methoxyethoxy)ethanol
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: 2-(2-butoxyethoxy)ethanol: Fire hazard, Immediate (acute) health hazard; Talc (Mg3H2(SiO3)4): Immediate (acute) health hazard; titanium dioxide: Immediate (acute) health hazard; 2-(2-methoxyethoxy)ethanol: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard

CERCLA: Hazardous substances.: 2-(2-butoxyethoxy)ethanol; 2-(2-methoxyethoxy)ethanol;

SARA 313		Product name	CAS number	Concentration
Form R - Reporting requirements	:	2-(2-butoxyethoxy)ethanol	112-34-5	7 - 13
		2-(2-methoxyethoxy)ethanol	111-77-3	3 - 7

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

Canada

WHMIS (Canada) : Class D-1B: Material causing immediate and serious toxic effects (Toxic). Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

Mexico

Classification

Flammability : 1 **Health** : 3 **Reactivity** : 1

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 3 * **Flammability** : 1 **Physical hazards** : 1

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 3 **Flammability** : 1 **Instability** : 1

Date of previous issue : **8/3/2009.**

Organization that prepared the MSDS : EHS

◤ **Indicates information that has changed from previously issued version.**

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

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Material Safety Data Sheet

Date of issue	**5 April 2009**
Version	**16**

1 . Product and company identification

Product name	:	PITT-TECH SATIN ACRYLIC ENAMEL
Code	:	90-477
Supplier	:	PPG Industries, Inc. One PPG Place Pittsburgh, PA 15272
Emergency telephone number	:	(412) 434-4515 (U.S.) (514) 645-1320 (Canada) 01-800-00-21-400 (Mexico)
Technical Phone Number	:	(412) 492-5200 (ALLISON PARK, PA) 8:00 a.m. - 5:00 p.m. EST

2 . Hazards identification

Emergency overview : DANGER!

HARMFUL IF ABSORBED THROUGH SKIN. CAUSES RESPIRATORY TRACT IRRITATION. MAY BE HARMFUL IF INHALED OR SWALLOWED. ASPIRATION HAZARD. CAN ENTER LUNGS AND CAUSE DAMAGE. MAY CAUSE EYE IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

Do not breathe vapor or mist. Do not swallow. Do not get in eyes or on skin or clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation	:	May be harmful if inhaled. Severely irritating to the respiratory system. Can irritate eyes, nose, mouth and throat.
Ingestion	:	May be harmful if swallowed. Aspiration hazard if swallowed. Can enter lungs and cause damage.
Skin	:	Toxic in contact with skin.
Eyes	:	Moderately irritating to eyes.

Over-exposure signs/symptoms

Inhalation	:	Adverse symptoms may include the following: respiratory tract irritation coughing
Ingestion	:	Adverse symptoms may include the following: nausea or vomiting
Skin	:	No specific data.
Eyes	:	Adverse symptoms may include the following: irritation watering redness
Medical conditions aggravated by over-exposure	:	Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

See toxicological information (section 11)

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3 . Composition/information on ingredients

Name	CAS number	%
talc , not containing asbestiform fibres	14807-96-6	3 - 7
Acetic acid, C9-11-branched alkyl esters, C10-rich	108419-34-7	1 - 5
2-(2-methoxyethoxy)ethanol	111-77-3	1 - 5

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do not use solvents or thinners.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous combustion products : Decomposition products may include the following materials:
carbon oxides
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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6 . Accidental release measures

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Do not breathe vapor or mist. Do not swallow. Do not get in eyes or on skin or clothing. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store below the following temperature: 32F / 0C.

8 . Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
talc , not containing asbestiform fibres	TWA	2 mg/m³ R	20 mppcf Z	2 f/cc 2 mg/m³ R TD	2 mg/m³	Not established
	STEL	Not established	1 f/cc Z	Not established	Not established	Not established
2-(2-methoxyethoxy)ethanol	TWA	Not established	Not established	Not established	Not established	30 ppm

Key to abbreviations

A	=	Acceptable Maximum Peak	S	=	Potential skin absorption
ACGIH	=	American Conference of Governmental Industrial Hygienists.	SR	=	Respiratory sensitization
C	=	Ceiling Limit	SS	=	Skin sensitization
F	=	Fume	TD	=	Total dust
IPEL	=	Internal Permissible Exposure Limit	TLV	=	Threshold Limit Value
OSHA	=	Occupational Safety and Health Administration.	TWA	=	Time Weighted Average
R	=	Respirable	Z	=	OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances

Consult local authorities for acceptable exposure limits.

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8 . Exposure controls/personal protection

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes : Safety glasses with side shields.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Respiratory : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state : Liquid.

Flash point : Closed cup: >93.33°C (>200°F)

Color : Not available.

Odor : Not available.

pH : Not available.

Boiling/condensation point : >37.78°C (>100°F)

Melting/freezing point : Not available.

Specific gravity : 1.05

Density (lbs / gal) : 8.76

Vapor pressure : 2.3 kPa (17.3 mm Hg)

Vapor density : Not available.

Volatility : 66% (v/v), 61.8% (w/w)

Odor threshold : Not available.

Evaporation rate : 31 (Butyl acetate. = 1)

Octanol/water partition coefficient : Not available.

% Solid. (w/w) : 38.2

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9 . Physical and chemical properties

10 . Stability and reactivity

Stability : Stable under recommended storage and handling conditions (see section 7).

Conditions to avoid : No specific data.

Materials to avoid : Reactive or incompatible with the following materials:,acids

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-(2-methoxyethoxy)ethanol	LD50 Oral	Rat	4 mL/kg	-
	LD50 Dermal	Rabbit	0.65 g/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Target organs : Contains material which causes damage to the following organs: lungs, upper respiratory tract, skin, eye, lens or cornea.
Contains material which may cause damage to the following organs: cardiovascular system.

Carcinogenicity

Conclusion/Summary : Not available.

Carcinogenicity : No known significant effects or critical hazards.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
talc , not containing asbestiform fibres	A4	3	-	-	-	-

Mutagenicity

Conclusion/Summary : Not available.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity

Conclusion/Summary : Not available.

Teratogenicity : No known significant effects or critical hazards.

Reproductive toxicity

Conclusion/Summary : Not available.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
2-(2-methoxyethoxy)ethanol	Acute LC50 7500000 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus	96 hours

Powered by ATRION

12 . Ecological information

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14 . Transport information

Regulation	UN number	Proper shipping name	Classes	PG*	Additional information
UN	None.	Not regulated.	None.	-	-
IMDG	None.	Not regulated.	None.	-	-
DOT	None.	Not regulated.	Not available.	-	-

PG* : Packing group

Reportable quantity RQ : CERCLA: Hazardous substances.: 2-(2-methoxyethoxy)ethanol;

15 . Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.
Australia inventory (AICS) : At least one component is not listed.
Canada inventory : All components are listed or exempted.
China inventory (IECSC) : Not determined.
Europe inventory : All components are listed or exempted.
Japan inventory (ENCS) : At least one component is not listed.
Korea inventory (KECI) : At least one component is not listed.
New Zealand : Not determined.
Philippines inventory (PICCS) : At least one component is not listed.

United States

U.S. Federal regulations : TSCA 12(b) annual export notification: No products were found.
TSCA 12(b) one-time export: No products were found.

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: 2-(2-methoxyethoxy)ethanol; talc , not containing asbestiform fibres
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: 2-(2-methoxyethoxy)ethanol: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard; talc , not containing asbestiform fibres: Immediate (acute) health hazard
CERCLA: Hazardous substances.: 2-(2-methoxyethoxy)ethanol;

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting requirements :	2-(2-methoxyethoxy)ethanol	111-77-3	1 - 5

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15 . Regulatory information

Canada

WHMIS (Canada) : Class D-1B: Material causing immediate and serious toxic effects (Toxic). Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

Mexico

Classification

Flammability : 1 **Health** : 3 **Reactivity** : 0

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 3 **Flammability** : 1 **Physical hazards** : 0

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 3 **Flammability** : 1 **Instability** : 0

Date of previous issue : **No previous validation.**

Organization that prepared the MSDS : EHS

Indicates information that has changed from previously issued version.

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

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Material Safety Data Sheet

Date of issue 19 May 2014
Version 22

1 . Product and company identification

Product name : FAST DRY 2500 DEEP BASE

Code : 94-636

Supplier : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)

Technical Phone Number : 888-977-4762

2 . Hazards identification

Emergency overview : DANGER!

COMBUSTIBLE LIQUID AND VAPOR. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF INHALED, ABSORBED THROUGH SKIN OR SWALLOWED. SANDING AND GRINDING DUSTS MAY BE HARMFUL IF INHALED. ASPIRATION HAZARD. CAN ENTER LUNGS AND CAUSE DAMAGE. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

Keep away from heat, sparks and flame. Do not swallow. Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled. Irritating to respiratory system. Can irritate eyes, nose, mouth and throat.

Ingestion : May be harmful if swallowed. Aspiration hazard if swallowed. Can enter lungs and cause damage.

Skin : Harmful in contact with skin. Irritating to skin.

Eyes : Irritating to eyes.

Over-exposure signs/symptoms

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone.

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See toxicological information (Section 11)

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3 . Composition/information on ingredients

Name	CAS number	%
Distillates (petroleum), hydrotreated light	64742-47-8	10 - 30
barium sulfate	7727-43-7	10 - 30
Naphtha (petroleum), hydrotreated heavy	64742-48-9	3 - 7
Kaolin	1332-58-7	3 - 7
titanium dioxide	13463-67-7	3 - 7
Stoddard solvent	8052-41-3	3 - 7
2-ethylhexan-1-ol	104-76-7	3 - 7
xylene	1330-20-7	1 - 5
Solvent naphtha (petroleum), light aromatic	64742-95-6	1 - 5
1,2,4-trimethylbenzene	95-63-6	0.5 - 1.5
ethylbenzene	100-41-4	0.1 - 1
2-butanone oxime	96-29-7	0.1 - 1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back.

Extinguishing media

Suitable : Use dry chemical, CO_2, water spray (fog) or foam.

Not suitable : Do not use water jet.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Hazardous combustion products : Decomposition products may include the following materials:
carbon oxides
sulfur oxides
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

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6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Use spark-proof tools and explosion-proof equipment. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling : Materials such as cleaning rags, paper wipes and protective clothing, which are contaminated with the product may spontaneously self-ignite. To avoid the risks of fires, all contaminated materials should be placed in a metal container filled with water and sealed. Contaminated materials should be removed from the workplace at the end of each working day and be stored outside. Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Do not swallow. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. Vapors are heavier than air and may spread along floors. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Storage : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store above the following temperature: 120F / 49C.

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8 . Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
Distillates (petroleum), hydrotreated light	TWA	200 mg/m³ (as total hydrocarbon vapor) S	Not established	200 mg/m³ S	Not established	Not established
barium sulfate	TWA	10 mg/m³	15 mg/m³ TD 5 mg/m³ R	10 mg/m³ TD	Not established	Not established
Kaolin	TWA	2 mg/m³ R	15 mg/m³ TD 5 mg/m³ R	2 mg/m³ R	10 mg/m³	Not established
	STEL	Not established	Not established	Not established	20 mg/m³	Not established
titanium dioxide	TWA	10 mg/m³	15 mg/m³ TD	10 mg/m³ TD	10 mg/m³ (as Ti)	Not established
	STEL	Not established	Not established	Not established	20 mg/m³ (as Ti)	Not established
Stoddard solvent	TWA	100 ppm	500 ppm	100 ppm	100 ppm	Not established
	STEL	Not established	Not established	Not established	200 ppm	Not established
xylene	TWA	100 ppm	100 ppm	100 ppm	100 ppm	Not established
	STEL	150 ppm	Not established	150 ppm	150 ppm	Not established
1,2,4-trimethylbenzene	TWA	25 ppm	Not established	25 ppm	25 ppm	Not established
	STEL	Not established	Not established	Not established	35 ppm	Not established
ethylbenzene	TWA	20 ppm	100 ppm	20 ppm	100 ppm	Not established
	STEL	Not established	Not established	Not established	125 ppm	Not established
2-butanone oxime	TWA	Not established	Not established	Not established	Not established	3 ppm
	STEL	Not established	Not established	Not established	Not established	10 ppm

Key to abbreviations

A = Acceptable Maximum Peak
ACGIH = American Conference of Governmental Industrial Hygienists.
C = Ceiling Limit
F = Fume
IPEL = Internal Permissible Exposure Limit
OSHA = Occupational Safety and Health Administration.
R = Respirable
Z = OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances
S = Potential skin absorption
SR = Respiratory sensitization
SS = Skin sensitization
STEL = Short term Exposure limit values
TD = Total dust
TLV = Threshold Limit Value
TWA = Time Weighted Average

Consult local authorities for acceptable exposure limits.

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8 . Exposure controls/personal protection

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Engineering measures : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes : Safety glasses with side shields.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Gloves : For prolonged or repeated handling, use the following type of gloves:

Recommended: nitrile rubber

Respiratory : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state : Liquid.

Flash point : Closed cup: 48.89°C (120°F)

Explosion limits : Lower: 0.8%

Material supports combustion. : Yes.

Color : Not available.

Odor : Not available.

pH : Not available.

Boiling/condensation point : >37.78°C (>100°F)

Melting/freezing point : Not available.

Specific gravity : 1.12

Density (lbs / gal) : 9.35

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9 . Physical and chemical properties

Vapor pressure : 0.37 kPa (2.8 mm Hg) [room temperature]
Vapor density : Not available.
Volatility : 53% (v/v), 37.61% (w/w)
Evaporation rate : 0.13 (butyl acetate = 1)
Solubility : Soluble in the following materials: cold water.
Partition coefficient: n-octanol/water : Not available.
% Solid. (w/w) : 62.39

10 . Stability and reactivity

Stability : Stable under recommended storage and handling conditions (see Section 7).
Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Materials to avoid : Reactive or incompatible with the following materials:,acids,oxidizing materials,strong alkalis
Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Naphtha (petroleum), hydrotreated heavy	LD50 Oral	Rat	>6 g/kg	-
	LC50 Inhalation	Rat	8500 mg/m3	4 hours
Kaolin	LD50 Oral	Rat	>5000 mg/kg	-
titanium dioxide	LD50 Oral	Rat	>10 g/kg	-
Stoddard solvent	LD50 Oral	Rat	>5 g/kg	-
2-ethylhexan-1-ol	LD50 Oral	Rat	2.05 g/kg	-
	LD50 Dermal	Rabbit	1970 mg/kg	-
xylene	LD50 Oral	Rat	4.3 g/kg	-
	LD50 Dermal	Rabbit	>1.7 g/kg	-
	LC50 Inhalation Vapor	Rat	5000 ppm	4 hours
Solvent naphtha (petroleum), light aromatic	LD50 Oral	Rat	8400 mg/kg	-
	LD50 Dermal	Rabbit	3.48 g/kg	-
1,2,4-trimethylbenzene	LD50 Oral	Rat	5 g/kg	-
	LC50 Inhalation	Rat	18000 mg/m3	4 hours
ethylbenzene	LD50 Oral	Rat	3.5 g/kg	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LC50 Inhalation Vapor	Rat	4000 ppm	4 hours
2-butanone oxime	LD50 Oral	Rat	930 mg/kg	-
	LD50 Dermal	Rabbit	200 uL/kg	-

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Defatting irritant : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

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11 . Toxicological information

Target organs : Contains material which causes damage to the following organs: brain, upper respiratory tract, skin, central nervous system (CNS).
Contains material which may cause damage to the following organs: blood, kidneys, lungs, the nervous system, liver, heart, gastrointestinal tract, eye, lens or cornea, stomach, testes.

Carcinogenicity

Carcinogenicity : Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	ACGIH	IARC	NTP	OSHA
Distillates (petroleum), hydrotreated light	A3	-	-	-
Kaolin	A4	-	-	-
titanium dioxide	A4	2B	-	-
xylene	A4	3	-	-
ethylbenzene	A3	2B	-	-

Carcinogen Classification code:
ACGIH: A1, A2, A3, A4, A5
IARC: 1, 2A, 2B, 3, 4
NTP: Proven, Possible
OSHA: +
Not listed or regulated as a carcinogen: -

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
ethylbenzene	Acute LC50 150 to 200 mg/L Fresh water	Fish - Bluegill - Lepomis macrochirus	96 hours

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

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14. Transport information

	DOT	TDG	Mexico	IMDG
UN number	UN1263	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3	3
Packing group	III	III	III	III
Environmental hazards	No.	No.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.	Not applicable.
Product RQ (lbs)	5323.8	Not applicable.	Not applicable.	Not applicable.
RQ substances	(xylene)	Not applicable.	Not applicable.	Not applicable.

Additional information

DOT : This product may be re-classified as "Combustible Liquid," unless transported by vessel or aircraft. Non-bulk packages (less than or equal to 119 gal) of combustible liquids are not regulated as hazardous materials in package sizes less than the product reportable quantity.

TDG : None identified.

Mexico : None identified.

IMDG : None identified.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

15 . Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.
Australia inventory (AICS) : At least one component is not listed.
Canada inventory (DSL) : At least one component is not listed.
China inventory (IECSC) : Not determined.
Europe inventory (REACH) : Please contact your supplier for information on the inventory status of this material.
Japan inventory (ENCS) : At least one component is not listed.
Korea inventory (KECI) : Not determined.
New Zealand (NZIoC) : Substance Use Restricted
Philippines inventory (PICCS) : At least one component is not listed.

United States

U.S. Federal regulations :

SARA 302/304: No products were found.
CERCLA: Hazardous substances.: ethylbenzene: 1000 lbs. (454 kg); xylene: 100 lbs. (45.4 kg);

SARA 311/312 SDS Distribution - Chemical Inventory - Hazard Identification:

Chemical name	CAS #	Acute	Chronic	Fire	Reactive	Pressure

Powered by IHS

15 . Regulatory information

Distillates (petroleum), hydrotreated light	**64742-47-8**	N	N	N	N	N
barium sulfate	**7727-43-7**	N	N	N	N	N
Naphtha (petroleum), hydrotreated heavy	**64742-48-9**	Y	N	Y	N	N
Kaolin	**1332-58-7**	Y	N	N	N	N
titanium dioxide	**13463-67-7**	N	Y	N	N	N
Stoddard solvent	**8052-41-3**	Y	N	Y	N	N
2-ethylhexan-1-ol	**104-76-7**	Y	N	Y	N	N
xylene	**1330-20-7**	Y	N	Y	N	N
Solvent naphtha (petroleum), light aromatic	**64742-95-6**	Y	N	Y	N	N
1,2,4-trimethylbenzene	**95-63-6**	Y	N	Y	N	N
ethylbenzene	**100-41-4**	Y	Y	Y	N	N
2-butanone oxime	**96-29-7**	Y	Y	Y	Y	N
	Product as-supplied :	Y	Y	Y	N	N

SARA 313	Chemical name	CAS number	Concentration
Supplier notification :	xylene	1330-20-7	1 - 5
	1,2,4-trimethylbenzene	95-63-6	0.5 - 1.5
	ethylbenzene	100-41-4	0.1 - 1

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Canada

WHMIS (Canada) : Class B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

Mexico

Classification

Flammability : 2 **Health** : 2 **Reactivity** : 0

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 2 * **Flammability** : 2 **Physical hazards** : 0

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 2 **Flammability** : 2 **Instability** : 0

Date of previous issue : **3/12/2014.**

Organization that prepared the MSDS : EHS

Indicates information that has changed from previously issued version.

Disclaimer

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16 . Other information

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

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PPG INDUSTRIES INC COATINGS & RESINS GROUP -- 98-51 AQUAPON W/B EPOXY PASTEL TINT BASE -- 8010-00F051865

========== Product Identification ==========

Product ID:98-51 AQUAPON W/B EPOXY PASTEL TINT BASE
MSDS Date:08/10/1995
FSC:8010
NIIN:00F051865
MSDS Number: CCFWN
=== Responsible Party ===
Company Name:PPG INDUSTRIES INC COATINGS & RESINS GROUP
Address:4325 ROSANNA DR
Box:9
City:ALLISON PARK
State:PA
ZIP:15101-5000
Country:US
Info Phone Num:412-492-5555
Emergency Phone Num:304-843-1300
CAGE:DO542
=== Contractor Identification ===
Company Name:PPG INDUSTRIES INC. COATINGS & RESINS GP
Address:4325 ROSEANNA DR PO BOX 9
Box:9
City:ALLISON PARK
State:PA
ZIP:15101
Phone:412-492-5555
CAGE:DO542

========== Composition/Information on Ingredients ==========

Ingred Name:TITANIUM DIOXIDE, TITANIUM OXIDE (SUSPECTED ANIMAL CARCINOGEN, IARC GROUP 3) *96-3*
CAS:13463-67-7
RTECS #:XR2275000
Fraction by Wt: 40-45%
OSHA PEL:15 MG/CUM
ACGIH TLV:10 MG/CUM (DUST)

Ingred Name:2-BUTOXYETHANOL (ETHYLENE GLYCOL MONOBUTYL ETHER), BUTYL CELLOSOLVE, BUTYL GLYCOL, GLYCOL ETHER EB * 96-3 *
CAS:111-76-2
RTECS #:KJ8575000
Fraction by Wt: 5-10%
Other REC Limits:25 PPM (SKIN)
OSHA PEL:50 PPM (SKIN)
ACGIH TLV:25 PPM (SKIN)

Ingred Name:ETHYLENE GLYCOL PROPYL ETHER, EKTASOLVE EP,
2-PROPOXYETHANOL
CAS:2807-30-9
RTECS #:KM2800000
Fraction by Wt: 2-5%

Ingred Name:TOLUENE (IARC CARC- GROUP 3) *96-3*
CAS:108-88-3
RTECS #:XS5250000
Fraction by Wt: 2-5%
Other REC Limits:375 MG/CUM
OSHA PEL:100 PPM
ACGIH TLV:100 PPM
EPA Rpt Qty:1000 LBS
DOT Rpt Qty:1000 LBS

Ingred Name:WATER
CAS:7732-18-5
RTECS #:ZC0110000
Fraction by Wt: 25-30%

Ingred Name:FILM FORMERS, RESINS, AND ADDITIVES
Fraction by Wt: 15-20%

========== Hazards Identification ==========

Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:INGESTION: HARMFUL/FATAL. EYES: IRRITATION. SKIN: IRRITATION, HARMFUL IF ABSORBED. PROLONGED CONTACT MAY CAUSE AN ALLERGIC REACTION. INHALATION: HARMFUL, ALLERGIC RESPIRATORY REACTION IN LUNGS, IRRITA TION TO EYES, NOSE & THROAT. (SEE SUPP)
Explanation of Carcinogenicity:NONE
Effects of Overexposure:IRRITATION, EYE WATERING, HEADACHES, NAUSEA, DIZZINESS, LOSS OF COORDINATION, REDNESS, ITCHING, BURNING SENSATION, VISUAL DISTURBANCES, DRYNESS, CRACKING, SWELLING.

========== First Aid Measures ==========

First Aid:INGESTION: DON'T INDUCE VOMITING. EYES: FLUSH W/WATER FOR 15 MINS. SKIN: FLUSH W/SOAP & WATER. INHALATION: REMOVE TO FRESH AIR. GIVE CPR IF NEEDED. INGESTION: CONTACT A POISON CONTROL CENTER IMMEDIATE LY & HAVE MATERIAL SAFETY DATA SHEET AVAILABLE. OBTAIN MEDICAL ATTENTION IN ALL CASES.

========== Fire Fighting Measures ==========

Flash Point Method:PMCC
Flash Point:94F
Extinguishing Media:CO2, DRY CHEMICAL/UNIVERSAL AQUEOUS FILM FORMING FOAM.
Fire Fighting Procedures:WATER SPRAY MAY BE INEFFECTIVE. USE WATER TO COOL CLOSED CONTAINERS. IF WATER IS USED, FOG NOZZLES ARE PREFERABLE. WEAR SCBA.
Unusual Fire/Explosion Hazard:KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT & OTHER IGNITION SOURCES. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT. (SEE SUPP)

Accidental Release Measures

Spill Release Procedures:USE MAXIMUM VENTILATION. WEAR PROTECTIVE EQUIPMENT. REMOVE IGNITION SOURCES. TAKE UP W/SAND & OTHER NONCOMBUSTIBLE ABSORBENTS. PLACE IN CLEAN, EMPTY CONTAINERS FOR DISPOSAL. ONLY SPILLED MATERIAL & AB SORBENTS SHOULD BE PLACED IN CONTAINERS.

Handling and Storage

Handling and Storage Precautions:DON'T STORE >120F. CONTAINERS SHOULD BE GROUNDED WHEN POURING. AVOID FREE FALL OF LIQUIDS IN EXCESS OF A FEW INCHES.

Exposure Controls/Personal Protection

Respiratory Protection:OVEREXPOSURE TO VAPORS MAY BE PREVENTED BY ENDURING VENTILATION CONTROLS, VAPOR EXHAUST/FRESH AIR ENTRY. NIOSH/MSHA APPROVED AIR PURIFYING/AIR SUPPLIED RESPIRATORS.
Ventilation:GENERAL DILUTION/LOCAL EXHAUST VENTILATION IN VOLUME & PATTERN TO KEEP CONCENTRATIONS BELOW EXPOSURE LIMITS.
Protective Gloves:NITRILE/NEOPRENE RUBBER
Eye Protection:CHEMICAL SPLASH GOGGLES/FULL FACE SHIELD
Other Protective Equipment:IMPERMEABLE APRON, PROTECTIVE CLOTHING.
Work Hygienic Practices:DISCARD CONTAMINATED CLOTHING, SHOES/GLOVES.
Supplemental Safety and Health
UNUSUAL FIRE CONT'D: DON'T APPLY TO HOT SURFACES. TOXIC GASES MAY FORM WHEN PRODUCT IS CONTACT BY FLAME/HOT SURFACES. HEALTH HAZARDS CONT'D: ETHYLENE SERIES GLYCOL ETHER/ACETATE MAY CAUSE ADVERSE EFFE CTS ON KIDNEYS, LIVER, BLOOD/BLOOD FORMING TISSUES.

Physical/Chemical Properties

Boiling Pt:B.P. Text:212-404.6F
Vapor Pres:16.6
Vapor Density:>1

Spec Gravity:1.45
Evaporation Rate & Reference:(BU O AC =100): 42
Solubility in Water:APPRECIABLE
Appearance and Odor:VISCOUS LIQUID W/CHARACTERISTIC ODOR OF SOLVENTS.
Percent Volatiles by Volume:38.46

Stability and Reactivity Data

Stability Indicator/Materials to Avoid:YES
STRONG ALKALIES, STRONG MINERAL ACIDS/STRONG OXIDIZING AGENTS.
Stability Condition to Avoid:HEAT, ELECTRICAL EQUIPMENT, SPARKS, OPEN FLAMES, HOT SURFACES.
Hazardous Decomposition Products:HEAT, WELDING/FLAME CUTTING: CO, OXIDES OF NITROGEN.

Disposal Considerations

Waste Disposal Methods:DISPOSE OF IAW/FEDERAL, STATE & LOCAL REGULATIONS. EMPTY CONTAINERS SHOULD BE RECYCLED/DISPOSED OF THROUGH AN APPROVED MANAGEMENT FACILITY.

Disclaimer (provided with this information by the compiling agencies): This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever, expressly or implied, warrants this information to be accurate and disclaims all liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.

Material Safety Data Sheet

Date of issue 9 May 2011
Version 16.01

1 . Product and company identification

Product name : AQUAPON WB SEMI_GLOSS COMP. B

Code : 98-100

Supplier : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272

Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)

Technical Phone Number : (412) 492-5200 (ALLISON PARK, PA) 8:00 a.m. - 5:00 p.m. EST

2 . Hazards identification

Emergency overview : WARNING!

HARMFUL OR FATAL IF SWALLOWED. HARMFUL IF ABSORBED THROUGH SKIN. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION. MAY BE HARMFUL IF INHALED. SANDING AND GRINDING DUSTS MAY BE HARMFUL IF INHALED. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER.

Do not breathe vapor or mist. Do not swallow. Do not get in eyes or on skin or clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled. Severely irritating to the respiratory system. Can irritate eyes, nose, mouth and throat.

Ingestion : Harmful or fatal if swallowed.

Skin : Toxic in contact with skin. Severely irritating to the skin. May cause an allergic skin reaction.

Eyes : Severely irritating to eyes. Risk of serious damage to eyes.

Over-exposure signs/symptoms

Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. There is some evidence that repeated exposure to organic solvent vapors in combination with constant loud noise can cause greater hearing loss than expected from exposure to noise alone. This product contains crystalline silica which can cause lung cancer or silicosis. The risk of cancer depends on the duration and level of exposure to dust from sanding surfaces or mist from spray applications.

Medical conditions aggravated by over-exposure : Pre-existing skin disorders and disorders involving any other target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See toxicological information (Section 11)

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3 . Composition/information on ingredients

Name	CAS number	%
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	25068-38-6	10 - 30
Talc , not containing asbestiform fibres	14807-96-6	10 - 30
2-(propyloxy)ethanol	2807-30-9	3 - 7
ethylene glycol monobutyl ether	111-76-2	1 - 5
Palygorskite	12174-11-7	1 - 5
Quartz (SiO2) (<10 microns)	14808-60-7	0.1 - 1
Quartz (SiO2) (>10 microns)	14808-60-7	0.1 - 1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do not induce vomiting.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products : Decomposition products may include the following materials:
carbon oxides
halogenated compounds
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

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6 . Accidental release measures

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not breathe vapor or mist. Do not swallow. Do not get in eyes or on skin or clothing. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store below the following temperature: 32F / 0C.

8 . Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
Talc , not containing asbestiform fibres	TWA	2 mg/m³ R	20 mppcf Z	2 mg/m³ R	2 mg/m³ R	Not established
2-(propyloxy)ethanol	TWA	Not established	Not established	25 ppm S	Not established	25 ppm S
ethylene glycol monobutyl ether	TWA STEL	20 ppm Not established	50 ppm S Not established	20 ppm S Not established	26 ppm S 75 ppm S	Not established Not established
Quartz (SiO2) (<10 microns)	TWA	0.025 mg/m³ R	10 mg/m³ R Z 30 mg/m³ TD Z 250 mppcf R Z	0.1 mg/m³ R	0.1 mg/m³ R	Not established
Quartz (SiO2) (>10 microns)	TWA	0.025 mg/m³ R	10 mg/m³ R Z 30 mg/m³ TD Z 250 mppcf R	0.1 mg/m³ R	0.1 mg/m³ R	Not established

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8 . Exposure controls/personal protection

			Z			

Key to abbreviations

A	=	Acceptable Maximum Peak	S	=	Potential skin absorption
ACGIH	=	American Conference of Governmental Industrial Hygienists.	SR	=	Respiratory sensitization
C	=	Ceiling Limit	SS	=	Skin sensitization
F	=	Fume	STEL	=	Short term Exposure limit values
IPEL	=	Internal Permissible Exposure Limit	TD	=	Total dust
OSHA	=	Occupational Safety and Health Administration.	TLV	=	Threshold Limit Value
R	=	Respirable	TWA	=	Time Weighted Average
Z	=	OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances			

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes : Chemical splash goggles.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Gloves : nitrile, neoprene

Respiratory : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state : Liquid.

Flash point : Closed cup: 93.33°C (200°F)

Color : Not available.

Odor : Not available.

pH : Not available.

Boiling/condensation point : >37.78°C (>100°F)

Melting/freezing point : Not available.

Specific gravity : 1.22

Density (lbs / gal) : 10.18

Vapor pressure : 2.3 kPa (16.9 mm Hg) [20°C]

Vapor density : Not available.

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9 . Physical and chemical properties

Volatility : 56% (v/v), 44.81% (w/w)
Evaporation rate : 33 (butyl acetate = 1)
Partition coefficient: n-octanol/water : Not available.
% Solid. (w/w) : 55.19

10 . Stability and reactivity

Stability : Stable under recommended storage and handling conditions (see section 7).
Conditions to avoid : No specific data.
Materials to avoid : Reactive or incompatible with the following materials:,water,acids,oxidizing materials,strong alkalis
Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	LD50 Oral	Rat	>2 g/kg	-
	LD50 Dermal	Rabbit	>2 g/kg	-
2-(propyloxy)ethanol	LD50 Oral	Rat	3089 mg/kg	-
	LD50 Dermal	Rabbit	1.337 g/kg	-
ethylene glycol monobutyl ether	LD50 Oral	Rat	250 mg/kg	-
	LD50 Dermal	Rabbit	220 mg/kg	-
	LC50 Inhalation Vapor	Rat	450 ppm	4 hours

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Defatting irritant : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Target organs : Contains material which causes damage to the following organs: brain, central nervous system (CNS).
Contains material which may cause damage to the following organs: blood, kidneys, liver, lymphatic system, cardiovascular system, upper respiratory tract, skin, eye, lens or cornea.

Carcinogenicity

Carcinogenicity : Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Talc , not containing asbestiform fibres	A4	3	-	-	-	-
ethylene glycol monobutyl ether	A3	3	-	-	-	-
Palygorskite	-	2B	-	-	-	-
Quartz (SiO2) (<10 microns)	A2	1	-	+	Proven.	-
Quartz (SiO2) (>10 microns)	A2	1	-	+	Proven.	-

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12 . Ecological information

Environmental effects : Water polluting material. May be harmful to the environment if released in large quantities.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
ethylene glycol monobutyl ether	Acute LC50 1490000 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus	96 hours
	Acute EC50 >1000 mg/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours
	Chronic NOEC 1000 mg/L Fresh water	Daphnia - Water flea - Daphnia magna	48 hours

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14 . Transport information

Regulation	UN number	Proper shipping name	Classes	PG*	Additional information
UN	3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	9	III	-
IMDG	3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.. Marine pollutant (reaction product: bisphenol-A-(epichlorhydrin); epoxy resin)	9	III	-
DOT	3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	9	III	-

PG* : Packing group

Reportable quantity RQ : CERCLA: Hazardous substances.: 2-(propyloxy)ethanol; ethylene glycol monobutyl ether;

15 . Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.
Australia inventory (AICS) : All components are listed or exempted.
Canada inventory (DSL) : All components are listed or exempted.
China inventory (IECSC) : All components are listed or exempted.

Europe inventory (REACH) : Please contact your supplier for information on the inventory status of this material.
Japan inventory (ENCS) : At least one component is not listed.

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15 . Regulatory information

Korea inventory (KECI) : All components are listed or exempted.

New Zealand (NZIoC) : Substance Use Restricted

Philippines inventory (PICCS) : All components are listed or exempted.

United States

U.S. Federal regulations :

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Talc , not containing asbestiform fibres; ethylene glycol monobutyl ether
CERCLA: Hazardous substances.: 2-(propyloxy)ethanol; ethylene glycol monobutyl ether;

SARA 311/312 MSDS Distribution - Chemical Inventory - Hazard Identification:

Chemical name	CAS #	Acute	Chronic	Fire	Reactive	Pressure
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin	25068-38-6	Y	N	N	N	N
Talc , not containing asbestiform fibres	14807-96-6	Y	N	N	N	N
2-(propyloxy)ethanol	2807-30-9	Y	N	Y	N	N
ethylene glycol monobutyl ether	111-76-2	Y	N	Y	N	N
Palygorskite	12174-11-7	N	Y	N	N	N
Quartz (SiO2) (<10 microns)	14808-60-7	N	Y	N	N	N
Quartz (SiO2) (>10 microns)	14808-60-7	N	Y	N	N	N
Product as-supplied :		Y	Y	N	N	N

SARA 313	Chemical name	CAS number	Concentration
Supplier notification :	2-(propyloxy)ethanol	2807-30-9	3 - 7
	ethylene glycol monobutyl ether	111-76-2	1 - 5

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Canada

WHMIS (Canada) : Class D-1A: Material causing immediate and serious toxic effects (Very toxic). Class D-1B: Material causing immediate and serious toxic effects (Toxic). Class D-2A: Material causing other toxic effects (Very toxic). Class D-2B: Material causing other toxic effects (Toxic).

Mexico

Classification

Flammability : 1 **Health** : 3 **Reactivity** : 0

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 3 * **Flammability** : 1 **Physical hazards** : 0

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 3 **Flammability** : 1 **Instability** : 0

Date of previous issue : **3/29/2011.**

Powered by ATRION

16 . Other information

Organization that prepared the MSDS : EHS

◤ **Indicates information that has changed from previously issued version.**

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

Powered by ATRION

Material Safety Data Sheet

Date of issue 10 March 2014
Version 40

1 . Product and company identification

Product name : OLYMPIC INTERIOR SATIN WHITE BASE 2
Code : 72102
Supplier : PPG Industries, Inc.
One PPG Place
Pittsburgh, PA 15272
Emergency telephone number : (412) 434-4515 (U.S.)
(514) 645-1320 (Canada)
01-800-00-21-400 (Mexico)
Technical Phone Number : 1-800-441-9695 (8:00 am to 5:00 pm EST)

2 . Hazards identification

Emergency overview : WARNING!

MAY BE HARMFUL IF INHALED OR SWALLOWED. SANDING AND GRINDING DUSTS MAY BE HARMFUL IF INHALED. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Potential acute health effects

Inhalation : May be harmful if inhaled.
Ingestion : May be harmful if swallowed.
Skin : No known significant effects or critical hazards.
Eyes : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation : No specific data.
Ingestion : No specific data.
Skin : No specific data.
Eyes : No specific data.

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

This Material Safety Data Sheet has been prepared in accordance with Canada's Workplace Hazardous Materials Information System (WHMIS) and the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See toxicological information (Section 11)

3 . Composition/information on ingredients

Name	CAS number	%
titanium dioxide	13463-67-7	10 - 30
Nepheline syenite	37244-96-5	1 - 5
Limestone	1317-65-3	1 - 5
silicon dioxide	7631-86-9	1 - 5
aluminium hydroxide	21645-51-2	0.5 - 1.5
proprietary ingredient	Not available.	0.5 - 1.5
Kieselguhr, soda ash flux-calcined	68855-54-9	0.1 - 1
pyrithione zinc	13463-41-7	0.1 - 1

Powered by IHS

3 . Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

If ingestion, irritation, any type of overexposure or symptoms of overexposure occur during or persists after use of this product, contact a POISON CONTROL CENTER, EMERGENCY ROOM OR PHYSICIAN immediately; have Material Safety Data Sheet information available. Never give anything by mouth to an unconscious or convulsing person.

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.

Skin contact : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Do NOT use solvents or thinners.

Inhalation : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Keep person warm and at rest. Do NOT induce vomiting.

Notes to physician : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5 . Fire-fighting measures

Flammability of the product : In a fire or if heated, a pressure increase will occur and the container may burst.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous combustion products : Decomposition products may include the following materials:
carbon oxides
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

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6 . Accidental release measures

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Do not swallow. Do not get in eyes or on skin or clothing. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. If this material is part of a multiple component system, read the Material Safety Data Sheet(s) for the other component or components before blending as the resulting mixture may have the hazards of all of its parts.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Do not store below the following temperature: 32F / 0C.

8 . Exposure controls/personal protection

Name	Result	ACGIH	OSHA	Ontario	Mexico	PPG
titanium dioxide	TWA STEL	10 mg/m³ Not established	15 mg/m³ TD Not established	10 mg/m³ TD Not established	10 mg/m³ (as Ti) 20 mg/m³ (as Ti)	Not established Not established
Nepheline syenite	TWA	Not established	Not established	10 mg/m³ TD	Not established	Not established
Limestone	TWA STEL	Not established Not established	15 mg/m³ TD 5 mg/m³ R Not established	Not established Not established	10 mg/m³ 20 mg/m³	Not established Not established
silicon dioxide	TWA	Not established	Not established	Not established	10 mg/m³ 3 mg/m³ R	Not established
aluminium hydroxide	TWA	1 mg/m³ 1 mg/m³ R	Not established	1 mg/m³ R	Not established	Not established
proprietary ingredient	TWA	10 mg/m³ (Dusts and mists)	15 mg/m³ (Dusts and mists) 5 mg/m³ (Dusts and mists) R	Not established	Not established	Not established
Kieselguhr, soda ash flux-calcined	TWA	Not established	Not established	Not established	10 mg/m³ 3 mg/m³ R	Not established

Key to abbreviations

A = Acceptable Maximum Peak
ACGIH = American Conference of Governmental Industrial Hygienists.
S = Potential skin absorption
SR = Respiratory sensitization

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8 . Exposure controls/personal protection

C	= Ceiling Limit	SS	= Skin sensitization
F	= Fume	STEL	= Short term Exposure limit values
IPEL	= Internal Permissible Exposure Limit	TD	= Total dust
OSHA	= Occupational Safety and Health Administration.	TLV	= Threshold Limit Value
R	= Respirable	TWA	= Time Weighted Average
Z	= OSHA 29CFR 1910.1200 Subpart Z - Toxic and Hazardous Substances		

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Engineering measures : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Eyes : Safety glasses with side shields.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Respiratory : If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state : Liquid.

Flash point : Closed cup: >93.33°C (>200°F)

Color : Not available.

Odor : Not available.

pH : Not available.

Boiling/condensation point : >37.78°C (>100°F)

Melting/freezing point : Not available.

Specific gravity : 1.23

Density (lbs / gal) : 10.26

Vapor pressure : 2.3 kPa (17.5 mm Hg) [room temperature]

Vapor density : Not available.

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9 . Physical and chemical properties

Volatility : 70% (v/v), 57.05% (w/w)
Evaporation rate : 0.36 (butyl acetate = 1)
Partition coefficient: n-octanol/water : Not available.
% Solid. (w/w) : 42.95

10 . Stability and reactivity

Stability : Stable under recommended storage and handling conditions (see Section 7).
Conditions to avoid : No specific data.
Materials to avoid : Reactive or incompatible with the following materials:,acids,oxidizing materials,strong alkalis
Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

11 . Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
titanium dioxide	LD50 Oral	Rat	>10 g/kg	-
pyrithione zinc	LD50 Oral	Rat	177 mg/kg	-
	LD50 Dermal	Rabbit	100 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	140 mg/m³	4 hours

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Target organs : Contains material which causes damage to the following organs: central nervous system (CNS).
Contains material which may cause damage to the following organs: lungs, the nervous system, upper respiratory tract, skin, eyes.

Carcinogenicity

Carcinogenicity : Contains material which may cause cancer, based on animal data. Risk of cancer depends on duration and level of exposure.

Classification

Product/ingredient name	ACGIH	IARC	NTP	OSHA
titanium dioxide	A4	2B	-	-
silicon dioxide	-	3	-	-
aluminium hydroxide	A4	-	-	-

Carcinogen Classification code:
ACGIH: A1, A2, A3, A4, A5
IARC: 1, 2A, 2B, 3, 4
NTP: Proven, Possible
OSHA: +
Not listed or regulated as a carcinogen: -

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12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
pyrithione zinc	Acute LC50 2.68 ppb Fresh water	Fish - Fathead minnow - Pimephales promelas	96 hours
	Acute LC50 400 ppb Marine water	Fish - Sheepshead minnow - Cyprinodon variegatus	96 hours
	Acute EC50 8.25 ppb Fresh water	Daphnia - Water flea - Daphnia magna	48 hours

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees. Section 6. Accidental release measures

14. Transport information

	DOT	TDG	Mexico	IMDG
UN number	Not regulated.	UN3082	UN3082	UN3082
UN proper shipping name	-	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (pyrithione zinc)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (pyrithione zinc)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (pyrithione zinc)
Transport hazard class(es)	-	9	9	9
Packing group	-	III	III	III
Environmental hazards	No.	Yes.	Yes.	Yes.
Marine pollutant substances	Not applicable.	(pyrithione zinc)	Not applicable.	(pyrithione zinc)

Additional information

DOT : None identified.

TDG : The product is not regulated as a dangerous good when transported by road or rail.

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14. Transport information

Mexico : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.

IMDG : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

15 . Regulatory information

United States inventory (TSCA 8b) : All components are listed or exempted.
Australia inventory (AICS) : At least one component is not listed.
Canada inventory (DSL) : All components are listed or exempted.
China inventory (IECSC) : At least one component is not listed.
Europe inventory (REACH) : Please contact your supplier for information on the inventory status of this material.
Japan inventory (ENCS) : At least one component is not listed.
Korea inventory (KECI) : At least one component is not listed.
New Zealand (NZIoC) : Substance Use Restricted
Philippines inventory (PICCS) : At least one component is not listed.

United States

U.S. Federal regulations :

SARA 302/304: No products were found.
CERCLA: Hazardous substances.: pyrithione zinc: No RQ is being assigned to the generic or broad class.; potassium hydroxide: 1000 lbs. (454 kg);

SARA 311/312 SDS Distribution - Chemical Inventory - Hazard Identification:

Chemical name	CAS #	Acute	Chronic	Fire	Reactive	Pressure
titanium dioxide	13463-67-7	N	Y	N	N	N
Limestone	1317-65-3	N	N	N	N	N
silicon dioxide	7631-86-9	N	N	N	N	N
aluminium hydroxide	21645-51-2	N	N	N	N	N
proprietary ingredient	Not available.	N	N	N	N	N
	Product as-supplied :	N	Y	N	N	N

Additional environmental information is contained on the Environmental Data Sheet for this product, which can be obtained from your PPG representative.

Canada

WHMIS (Canada) : Class D-2A: Material causing other toxic effects (Very toxic).

Mexico

Classification

Flammability : 1 **Health** : 1 **Reactivity** : 0

16 . Other information

Hazardous Material Information System (U.S.A.)

Health : 1 * **Flammability** : 1 **Physical hazards** : 0
(*) - Chronic effects

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16 . Other information

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on MSDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 1 **Flammability** : 1 **Instability** : 0

Date of previous issue : **8/19/2013.**

Organization that prepared the MSDS : EHS

Indicates information that has changed from previously issued version.

Disclaimer

The information contained in this data sheet is based on present scientific and technical knowledge. The purpose of this information is to draw attention to the health and safety aspects concerning the products supplied by PPG, and to recommend precautionary measures for the storage and handling of the products. No warranty or guarantee is given in respect of the properties of the products. No liability can be accepted for any failure to observe the precautionary measures described in this data sheet or for any misuse of the products.

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MATERIAL SAFETY DATA SHEET

THIS MSDS COMPLIES WITH 29 CFR 1910.1200 (HAZARD COMMUNICATION STANDARD)
IMPORTANT: Read this MSDS before handling & disposing of this product.
Pass this information on to employees, customers, & users of this product.

SECTION 1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION / HAZARD RATINGS

PRODUCT IDENTITY: **PORTER 5132 PAINT THINNER**
COMPANY IDENTITY: PACKAGING SERVICE CO., INC.
COMPANY ADDRESS: 1904 MYKAWA ROAD
COMPANY CITY: PEARLAND, TX 77581
COMPANY PHONE: 1-281-485-1458
CHEMTREC PHONE: 1-800-424-9300
DISTRIBUTED BY: **Porter Paints**
Louisville, KY 40203

HAZARD RATINGS:
HEALTH (NFPA): 0
HEALTH (HMIS): 1
FLAMMABILITY: 2
REACTIVITY: 0

MS6R01 **SECTION 2. INGREDIENT & REGULATORY INFORMATION**

All components of this product are on the TSCA list.
SARA Title III Section 313 Supplier Notification
This product contains the indicated <*> toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning & Community Right-To-Know Act of 1986 & of 40 CFR 372. This information must be included in all MSDSs that are copied and distributed for this material.

SARA TITLE III INGREDIENTS	CAS#	WT. % (REG. SECTION)	RQ(LBS)
Medium Aliphatic Solvent Naphtha	*64742-88-7	97-100 (311,312)	None
*1,2,4-Trimethylbenzene	95-63-6	< 3 (311,312,313,RCRA)	1000

SARA SECTION 311/312 HAZARDS: Acute Health, Fire

MATERIAL	CAS #	TWA (OSHA)	TLV (ACGIH)	HAP
Medium Aliphatic Solvent Naphtha	*64742-88-7	500 ppm	100 ppm	No
1,2,4-Trimethylbenzene	95-63-6	25 ppm	25 ppm	No

This product contains no EPA Hazardous Air Pollutants (HAP) in amounts > 0.1%.
Using manufacturers' data, based on EPA Method 311, the following EPA Hazardous Air Pollutants may be present in trace amounts (less than 0.1%):
Polycyclic Aromatics

MATERIAL	CAS #	CEILING	STEL (OSHA/ACGIH)
		None Known	None Known

SECTION 2. INGREDIENT & REGULATORY INFORMATION (CONTINUED)

CALIFORNIA PROPOSITION 65: This product contains no known chemicals known to the State of California to cause cancer or reproductive toxicity.
DOT SHIPPING NAME: Bulk: Petroleum Distillates, n.o.s., Combustible liquid, UN1268, PG-III
Combustible liquid. Not DOT regulated on trucks in containers of < 119 gallons.
DRUM LABEL: None (Combustible Liquid)

MS6R01

SECTION 3. HAZARDS IDENTIFICATION

THRESHOLD LIMIT VALUE: 90 ppm (Freshly Prepared)
CONTAINS: MEDIUM ALIPHATIC SOLVENT NAPHTHA,PETROLEUM NAPHTHA

WARNING!
COMBUSTIBLE!
ACUTE HAZARDS

EYE & SKIN CONTACT:
Primary irritation to skin, defatting, dermatitis.
Primary irritation to eyes, redness, tearing, blurred vision.
Liquid can cause eye irritation. Wash thoroughly after handling.

INHALATION:
Anesthetic. Irritates respiratory tract. Acute overexposure can cause serious nervous system depression. Vapor harmful.

SWALLOWING:
Harmful or fatal if swallowed.
Swallowing can cause abdominal irritation, nausea, vomiting & diarrhea.

SUBCHRONIC HAZARDS/CONDITIONS AGGREVATED

CONDITIONS AGGREVATED
Persons with severe skin, liver or kidney problems should avoid use.

SECTION 3. HAZARDS IDENTIFICATION (CONTINUED)

CHRONIC HAZARDS

CANCER, REPRODUCTIVE & OTHER CHRONIC HAZARDS:
This product has no carcinogens listed by IARC, NTP, NIOSH, OSHA or ACGIH, as of this date, greater or equal to 0.1%.
This product may contain less than 1 ppm of Benzene.
Not considered hazardous in such low concentrations.

SECTION 4. FIRST AID MEASURES PROCEDURES

EYE CONTACT:
For eyes, flush with plenty of water for 15 minutes & get medical attention.
SKIN CONTACT:
In case of contact with skin immediately remove contaminated clothing.
Wash thoroughly with soap & water. Wash contaminated clothing before reuse.
INHALATION:
After high vapor exposure, remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped give artificial respiration.
SWALLOWING:
If swallowed, CALL A PHYSICIAN IMMEDIATELY! Do NOT induce vomiting.
Have patient lie down & keep warm. Vomiting may lead to pneumonitis, which may be fatal.

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SECTION 5. FIRE FIGHTING MEASURES

AUTO IGNITION TEMPERATURE: 276 C / 530 F (Lowest Component)
LOWER FLAMMABLE LIMIT IN AIR (% by vol): .9
FLASH POINT (TEST METHOD): 40 C / 104 F (TCC)
FLAMMABILITY CLASSIFICATION: Class II
EXTINGUISHING MEDIA
NFPA Class B extinguishers (Carbon Dioxide or foam) for Class II liquid fires.
SPECIAL FIRE FIGHTING PROCEDURES
Water spray may be ineffective on fire but can protect fire-fighters & cool closed containers. Use fog nozzles if water is used.
Do not enter confined fire-space without full bunker gear.
Helmet with face shield, bunker coats, gloves & rubber boots).
Use NIOSH approved positive-pressure self-contained breathing apparatus.
UNUSUAL EXPLOSION AND FIRE PROCEDURES

COMBUSTIBLE!

Keep container tightly closed.
Isolate from oxidizers, heat, & open flame.
Closed containers may explode if exposed to extreme heat.
Applying to hot surfaces requires special precautions.
Empty container very hazardous! Continue all label precautions!

SECTION 6. ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES
Stop spill at source. Dike area & contain. Clean up remainder with absorbent materials. Mop up & dispose of.

WASTE DISPOSAL METHOD
Recycle or dispose of observing local, state & Federal health, safety & pollution laws. If questions exist, contact the appropriate agencies.

SECTION 7. HANDLING AND STORAGE

HANDLING
Isolate from oxidizers, heat, & open flame.
Use only with adequate ventilation. Avoid breathing of vapor or spray mist.
Avoid prolonged or repeated contact with skin.
Wear OSHA Standard goggles or face shield. Consult Safety Equipment Supplier.
Wear gloves, apron & footwear impervious to this material. Wash clothing before reuse.
Avoid free fall of liquid. Ground containers when transferring. Do not flame cut, braze, or weld. Empty container very hazardous! Continue all label precautions!

STORAGE
Do not store above 49 C/120 F. Store large amounts in structures made for OSHA Class II liquids. Keep container tightly closed & upright when not in use to prevent leakage.

MS6R01 **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION:**

EXPOSURE CONTROLS
Ventilate to keep vapors of this material below 45 ppm. If over TLV, in accordance with 29 CFR 1910.134, use NIOSH approved positive-pressure self-contained breathing apparatus.
Consult Safety Equipment Supplier. Use explosion-proof equipment.

VENTILATION

LOCAL EXHAUST	: Necessary
MECHANICAL (GENERAL)	: Acceptable
SPECIAL	: None
OTHER	: None

PERSONAL PROTECTIONS:
Wear OSHA Standard goggles or face shield. Consult Safety Equipment Supplier.
Wear gloves, apron & footwear impervious to this material. Wash clothing before reuse.

SECTION 9. PHYSICAL DATA

APPEARANCE:		Liquid,Water-White	
ODOR:		Aromatic	
BOILING RANGE:	161 176 197 C / 323 350 388 F		
GRAVITY @ 60 F:			
API:		48.6	
SPECIFIC GRAVITY (Water=1):		.786	
POUNDS/GALLON:		6.546	
VOC'S (>0.44 Lbs/Sq In):	0.0 Vol. % /	0.0 g/L /	0.000 Lbs/Gal
TOTAL VOC'S (TVOC):	100.0 Vol. % /	785.8 g/L /	6.546 Lbs/Gal
NONEXEMPT VOC'S (CVOC):	100.0 Vol. % /	785.8 g/L /	6.546 Lbs/Gal
HAZARDOUS AIR POLLUTANTS (HAPS):	0.0 Wt. % /	0.0 g/L /	0.000 Lbs/Gal
VAPOR PRESSURE (mm of Hg)@20 C		2.0	
NONEXEMPT VOC PARTIAL PRESSURE (mm of Hg @ 20 C)		2.0	
VAPOR DENSITY (air=1):		4.9	
WATER ABSORPTION:		Negligible	
SOLVENCY PARAMETERS:			
HKB (Hydrogen Bonding):		14.5	
PKB (Polarity):		33.4	
DKB (Dispersion):		52.2	
REFRACTIVE INDEX:		1.438	

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SECTION 10. REACTIVITY DATA

STABILITY
Stable

CONDITIONS TO AVOID
Isolate from oxidizers, heat,& open flame.

MATERIALS TO AVOID
Isolate from strong oxidizers such as permanganates, chromates & peroxides.

HAZARDOUS DECOMPOSITION PRODUCTS
Carbon Monoxide, Carbon Dioxide from burning.

HAZARDOUS POLYMERIZATION
Will not occur.

NOTICE

The supplier disclaims all expressed or implied warranties of merchantability or fitness for a specific use, with respect to the product or the information provided herein, except for conformation to contracted specifications. All information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations as to its accuracy or sufficiency. Conditions of use are beyond our control, and therefore users are responsible for verifying the data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product. Users also assume all risks in regards to the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or process.

Material Safety Data Sheet

Prang Media Mixer

1. Chemical Product and Company Identification

Company Identification Dixon Ticonderoga Company
195 International Parkway
Heathrow, FL 32746-5036
Telephone: 800-824-9430

Date prepared: May 7, 2003
Last revised: May 22, 2006

Emergency call: **800-824-9430**

Product Name **Prang Media Mixer**

Product Code(s) 42800

2. Composition/Information On Ingredients

Component	CAS Reg. No	Percent Weight

Products bearing the CP Certified Products or AP Approved Products seals of the Art and Creative Materials Institute's, Inc. are certified in a program of toxicological evaluation by a medical expert, subject to review by the Institute's Toxicological Advisory Board, to contain no materials in sufficient quantities to be toxic or injurious to humans or cause acute or chronic health problems. **Conforms to ASTM D-4236**

This product is not considered to be a hazardous substance as defined under OSHA's Hazard Communication Standard (29 CFR 1910.1200)

3. Hazards Identification

Emergency Overview Not an acute hazard- conforms to ASTM D-4236
CAUTION!
Packaging may be subject to ignition by fire and may release toxic or other irritating gases

4. First Aid Measures

Eye Contact Flush eyes large amounts of water for at least fifteen minutes. Contact physician
Skin Contact Wash skin with soap and water. Seek medical attention in the unlikely event that irritation occurs
Ingestion Unlikely to be toxic by ingestion, but seek medical attention
Inhalation No applies

5. Fire Fighting Measures

Extinguishing Media Carbon dioxide, dry chemical or foam recommended. Apply water to cool exposed closed containers
Special Fire Fighting Procedures Self contained breathing apparatus (SCBA) and full protective equipment recommended
Unusual Fire and Explosion Hazards Packaging may be subject to ignition by fire and may release toxic gases

Flammability Data

Flash Point	No data
Flammability limits	No data
Auto-ignition temperature	No data
Dust cloud ignition temperature	No data
Dust layer ignition temperature	No data

HMIS Ratings	
Health	1
Flammability	0
Reactivity	0
Protective Equipment	A

6. Accidental Release Measures

Small spill Sweep or wipe up material. Place spilled material into appropriate waste containers for disposal

Large spill Sweep or wipe up material. Place spilled material into appropriate waste containers for disposal

7. Handling and Storage

Handling Contents will stain. The use of smocks and gloves to protect personal clothing is suggested.
Wash hands and surface after use.

Storing Do not store near heat or open flame

Continued on next page

8. Exposure Controls/Personal Protection

Engineering Controls The use of local ventilation is recommended

Personal protection No special skin protection required. Wash skin if irritation is experienced.
Eye protection is recommended

9. Physical and Chemical Properties

Physical State	Gel
Appearance	Clear gel
Color	Clear
Odor	Mild soapy odor
pH	No data
Specific gravity	No data
Boiling point	No data
Freezing/melting point	No data
Evaporation rate	No data
Solubility	No data
Volatility	No data

10. Stability and Reactivity

General	This product is stable and hazardous polymerization will not occur
Incompatibility	None known
Hazardous decomposition	As with all burning organic matter, carbon monoxide and other toxic fumes may be released

11. Toxicological Information

Acute/Chronic Toxicity
Carcinogenicity
Mutagenicity

Products bearing the CP Certified Products or AP Approved products seals of the Art and Creative Material's Institute are certified in a program of toxicological evaluation by a medical expert, subject to review by the Institute's Toxicological Advisory Board to contain no materials in sufficient quantities to be toxic or injurious to humans or cause acute or chronic health problems. Conforms to ASTM D-4236

12. Ecological Information

This product has not been evaluated for overall environmental effects

13. Disposal Considerations

Contain and place in approved container. Dispose of per Local, State, and Federal regulations

14. Transportation Information

DOT Classification	Not regulated	(US)	**UN/NA Number**	Not regulated
TDG Classsification	Not regulated	(Canada)	**IMO/IMDG Classification**	Not regulated
ADR/RID Classification	Not regulated	(Europe)	**ICAO/IATA Classification**	Not regulated

15. Regulatory Information

OSHA Hazard Communication Status This product is not considered to be a hazardous substance under OSHA's Federal Hazard Communication Standard 29 CFR 1910.1200

Toxic Substances Control Act (TSCA) Status All ingredients of this material has been reported to the US EPA and are included in the TSCA inventory

16. Other Information

For further product safety information call 800-824-9430

Validated and Verified by Dixon Ticonderoga Co.
May 22, 2006

This information contained herein is based on data considered accurate. However no warranty is expressed or implied regarding the accuracy of these data or results obtained from the use thereof. Dixon Ticonderoga company assumes no responsibility for personal damage caused by the product. Users assume all risks associated with use.

✓ From: 1-800-232-9396 To: Mary Page: 1/2 Date: 8/23/2004 2:50:38 PM

DIXON
DIXON TICONDEROGA COMPANY
"Since 1795"

Material Safety Data Sheet

Prang Ready to Use Paint 00021-XXXX

1. Chemical product and Company Identification

Company Identification	Dixon Ticonderoga Company 195 International Parkway Heathrow, FL 32746-5036 Telephone: 800-824-9430	**Date prepared:** **Last revised:** **Emergency call:**	May 8, 2003 November 13, 2002 800-824-9430
Product Name	**Prang Ready to Use Paint**		
Product Code(s)	20801, 20802, 20803, 20804, 20805, 20806, 20807, 20808, 20809, 21601, 21602, 21603, 21604, 21605, 21606, 21607, 21608 21609, 21618, 21619, 21634, 21696, 23201, 23202. 23203, 23204, 23205, 23206, 23207, 23208, 23209, 23218, 23219, 23234 22801, 22802, 22803, 22804, 22805, 22806, 22807, 22808, 22809, 22818, 22819, 22834		

2. Composition/Information On Ingredients

Component	CAS Reg. No	Percent Weight

Products bearing the CP Certified Products or AP Approved Products seals of the Art and Creative Materials Institute's, Inc. are certified in a program of toxicological evaluation by a medical expert, subject to review by the Institute's Toxicological Advisory Board, to contain no materials in sufficient quantities to be toxic or injurious to humans or cause acute or chronic health problems. **Conforms to ASTM D-4236**

This product is not considered to be a hazardous substance as defined under OSHA's Hazard Communication Standard (29 CFR 1910.1200)

3. Hazards Identification

Emergency Overview Not an acute hazard conforms to ASTM D 4236
CAUTION!
Packaging may be subject to ignition by fire and may release toxic or other irritating gases

4. First Aid Measures

Eye Contact	Flush eyes large amounts of water for at least fifteen minutes. Contact physician
Skin Contact	Wash skin with soap and water. Seek medical attention in the unlikely event that irritation occurs
Ingestion	Unlikely to be toxic by ingestion, but seek medical attention
Inhalation	If symptomatic, move to fresh air and seek medical attention

V156

5. Fire Fighting Measures

Extinguishing Media	Carbon dioxide, dry chemical or foam recommended. Apply water to cool exposed closed containers
Special Fire Fighting Procedures	Self contained breathing apparatus (SCBA) and full protective equipment recommended
Unusual Fire and Explosion Hazards	Packaging may be subject to ignition by fire and may release toxic gases

Flammability Data

Flash Point	No data
Flammability limits	No data
Auto-ignition temperature	No data
Dust cloud ignition temperature	No data
Dust layer ignition temperature	No data

HMIS Ratings	
Health	1
Flammability	0
	0
Protective Equipment	A

6. Accidental Release Measures

Small spill	Sweep or wipe up material. Place spilled material into appropriate waste containers for disposal
Large spill	Sweep or wipe up material. Place spilled material into appropriate waste containers for disposal

7. Handling and Storage

Handling	Contents may stain. The use of smocks to protect personal clothing is suggested. Wash hands and surface after use.
Storing	Do not store near heat or open flame

Continued on next page

8. Exposure Controls/Personal Protection

Engineering Controls	The use of local ventilation is recommended
Personal protection	No special skin protection required. Wash skin if irritation is experienced. Eye protection is recommended

9. Physical and Chemical Properties

Physical State	Liquid
Appearance	Assorted colored liquids
Color	Various colors
Odor	Slight tempera paint type odor
pH	No data
Specific gravity	No data
Boiling point	No data
Freezing/melting point	No data
Evaporation rate	No data
Solubility	No data
Volatility	No data

10. Stability and Reactivity

General	This product is stable and hazardous polymerization will not occur
Incompatibility	None known
Hazardous decomposition	As with all burning organic matter, carbon monoxide and other toxic fumes may be released

11. Toxicological Information

Acute/Chronic Toxicity **Carcinogenicity** **Mutagenicity**	Products bearing the CP Certified Products or AP Approved products seals of the Art and Creative Material's Institute are certified in a program of toxicological evaluation by a medical expert, subject to review by the Institute's Toxicological Advisory Board to contain no materials in sufficient quantities to be toxic or injurious to humans or cause acute or chronic health problems. Conforms to ASTM D-4236

12. Ecological Information

This product has not been evaluated for overall environmental effects

13. Disposal Considerations

Contain and place in approved container. Dispose of per Local, State, and Federal regulations

14. Transportation Information

DOT Classification	Not regulated	(US)	**UN/NA Number**	Not regulated
TDG Classsification	Not regulated	(Canada)	**IMO/IMDG Classification**	Not regulated
ADR/RID Classification	Not regulated	(Europe)	**ICAO/IATA Classification**	Not regulated

15. Regulatory Information

OSHA Hazard Communication Status	This product is not considered to be a hazardous substance under OSHA's Federal Hazard Communication Standard 29 CFR 1910.1200
Toxic Substances Control Act (TSCA) Status	All ingredients of this material has been reported to the US EPA and are included in the TSCA inventory

16. Other Information

For further product safety information call 800-824-9430

Validated and Verified by Dixon Ticonderoga Co.
May 8, 2003

This information contained herein is based on data considered accurate. However no warranty is expressed or implied regarding the accuracy of these data or results obtained from the use thereof. Dixon Ticonderoga company assumes no responsibility for personal damage caused by the product. Users assume all risks associated with use.

DIXON M-03

2463800 - PREEN GARDEN WEED PREVENTER
MSDS
MANUFACTURER/SUPPLIER: LEBANON SEABOARD CORP.
  1600 EAST CUMBERLAND ST
  LEBANON, PA USA 17042
PHONE: 800-532-0090 INFORMATION
 HEALTH EMERGENCY: 888-208-1368 PROSAR
 ENVIRONMENTAL: 800-424-9300 CHEMTREC

PHYSICAL/CHEMICAL CHARACTERISTICS:
  BOILING POINT: NA
  MELTING POINT: NA
  FREEZING POINT: NG
  POUR POINT: NG
  SOFTENING POINT: NG
  SPECIFIC GRAVITY: NA
  VAPOR PRESSURE: NA
  VAPOR DENSITY: NA
  PERCENT VOLATILES: NG
  EVAPORATION RATE: NG
  pH: EQ   7
  MOLECULAR WEIGHT: NG
  VISCOSITY: NG
  SOLUBILITY IN WATER: Slight
    REACTIVITY IN H2O: N/A
  ODOR/APPEARANCE/OTHER CHARACTERISTICS: Yellowish granules
    slight odor
    DENSITY: 30#/FT3.
FIRE AND EXPLOSION DATA:
  CLOSED CUP FLASH PT.: NA
  OPEN CUP FLASH POINT: NA
  FIRE POINT: NG
  AUTO IGNITION: NA
  LOWER EXPLOSION LIMIT: NA
  UPPER EXPLOSION LIMIT: NA
SHIPPING REGULATIONS:
  UN/NA NUMBER: NG
  DOT HAZARD CLASS: NG
  SHIPPING LABEL: Not given
  SHIPPING NAME: Not given
PREPARED:
  PREPARER'S NAME & TITLE: Not given
  PREPARATION DATE: 3/22/2010 rev.
COMPONENT(S):
  A,A,A-TRIFLUORO-2,6-DINITRO-N N-DIPROPYL-P-TOLUIDINE:
    OSHA PEL: N* ppm

ACGIH TLV: N* ppm
STEL: NG ppm
PERCENT OF PRODUCT: EQ 1.47%
CAS NO.: 1582098
NOTE: * Trifluralin / PEL and TLV: N/L.

CORN COB BASE
OSHA PEL: 15 mg/m3
ACGIH TLV: 10 mg/m3
STEL: NG ppm
PERCENT OF PRODUCT: EQ 98.53%
CAS NO.: Not given
NOTE: * Non Hazardous Component / Nuisance Dust.

Text Section(s)

IDENTIFICATION

See data pages for additional information.
PRODUCT NAME: Greenview Preen the Weed Preventer 1.47%.
EPA #: 961-280
EMERGENCY TELEPHONE NO.: 888-208-1368 PROSAR +
OTHER INFORMATION CALLS: 800-532-0090
ENVIRONMENTAL: 800-424-9300 CHEMTREC

MANUFACTURER'S NAME AND ADDRESS:
LEBANON SEABOARD CORPORATION
1600 EAST CUMBERLAND ST
LEBANON, PA 17042

HAZARDOUS INGREDIENTS/IDENTITY

See component page(s) for additional information.

HAZARDOUS COMPONENT(S) (CHEMICAL & COMMON NAME(S))	OTHER EXPOSURE LIMITS
a,a,a-trifluoro-2,6-dinitro-N N-dipropyl-p-toluidine (Trifluralin)	N/L
NON-HAZARDOUS COMPONENTS:	
(Corn Cob Base) Nuisance dust	N/A

PHYSICAL & CHEMICAL CHARACTERISTICS

See data pages for additional information.

FIRE & EXPLOSION DATA

See data pages for additional information.
AUTO-IGNITION TEMPERATURE: N/A.
EXTINGUISHER MEDIA: Water, foam, or dry chemical.
SPECIAL FIRE FIGHTING PROCEDURES: Use self-contained breathing apparatus and protective clothing. Do not allow contamination of any water supply.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Toxic fumes may be emitted.

PHYSICAL HAZARDS

(REACTIVITY DATA).
STABILITY: Stable.
CONDITIONS TO AVOID: Not determined.
INCOMPATIBILITY (MATERIALS TO AVOID): None determined.
HAZARDOUS DECOMPOSITION PRODUCTS: Fire conditions may emit toxic fumes.
HAZARDOUS POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID: Not determined.

HEALTH HAZARDS

ACUTE: Not determined.
CHRONIC: Not determined.
SIGNS AND SYMPTOMS OF EXPOSURE: Not determined.
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Possible skin irritation for sensitive individuals.
CHEMICALS LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN:
NATIONAL TOXICOLOGY PROGRAM: No.
IARC MONOGRAPHS: No.
OSHA: No.
EMERGENCY AND FIRST AID PROCEDURES:
INHALATION: Remove to fresh air.
EYES: Flush with running water.
SKIN: Wash with soap and water.
INGESTION: Seek medical assistance.
ROUTES OF ENTRY:
INHALATION: Not likely.
EYES: Not likely.
SKIN: Possible for sensitive persons.
INGESTION: Not likely.

NFPA:
HEALTH: 1

FIRE: 0
REACTIVITY: 0
SPECIAL:
HEALTH 1
FLAMMABILITY 0
REACTIVITY 0
PERS. PROTECTION B

SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store in dry, cool area, away from foodstuffs or other chemicals and heat sources. Wash hands with soap and water after handling.

OTHER PRECAUTIONS: None.

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Clean up and use per label directions. If contaminated, place in proper pesticide waste disposal.

WASTE DISPOSAL METHODS (CONSULT FEDERAL, STATE, AND LOCAL REGULATIONS): Wrap carefully, and place in proper pesticide waste disposal. Avoid contamination of any body of water.

SPECIAL PROTECTION INFORMATION/CONTROL MEASURES

RESPIRATORY PROTECTION (SPECIFY TYPE): Nuisance dust respirator.

VENTILATION: Normal.

LOCAL EXHAUST: Not required.

MECHANICAL (GENERAL): Not required.

SPECIAL: None.

OTHER: None.

PROTECTIVE GLOVES: Ma use rubber gloves.

EYE PROTECTION: May use goggles or glasses.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Not normally required.

WORK/HYGIENIC PRACTICES: Wash with soap and water after using.

ADDITIONAL/IMPORTANT INFORMATION

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES: although preparer and owner have taken reasonable care in the preparation of this document, we extend no warranties and make no representation as to the accuracy or completeness

of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each user should make a determination as to the suitability of the information for their particular purpose(s). A request has been made to the manufacturer to approve the contents of this material safety data sheet. Upon receipt of any changes a new MSDS will be made available.

//

SAFETY DATA SHEET

1. Identification

Product identifier **PRE-GAME**

Other means of identification

SDS number 540N-09A

Product code HIL00456

Recommended use Floor Cleaner

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Manufacturer

Company name HILLYARD INDUSTRIES

Address 302 North Fourth St.
St. Joseph, MO 64501

Contact person Regulatory Affairs

Telephone number (816) 233-1321 (Ext. 8285)

Fax (816) 383-8485

E-mail regulatoryaffairs@hillyard.com

Emergency telephone # (800) 424-9300
(Only in the event of chemical emergency involving a spill, leak, fire, exposure, or accident involving chemicals.)

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement The mixture does not meet the criteria for classification.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response If in eyes, flush with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If swallowed: Call a poison center/doctor if you feel unwell. Wash hands after handling.

Storage Store away from incompatible materials.

Disposal Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law in compliance with applicable federal, state and local requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Dipropylene glycol monomethyl ether		34590-94-8	1 - < 3

Chemical name	Common name and synonyms	CAS number	%
Propylene glycol monomethyl ether		107-98-2	1 - < 3
Other components below reportable levels			90 - 100

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed Direct contact with eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed Treat symptomatically.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Avoid prolonged exposure. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Dipropylene glycol monomethyl ether (CAS 34590-94-8)	PEL	600 mg/m3
		100 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Dipropylene glycol monomethyl ether (CAS 34590-94-8)	STEL	150 ppm
	TWA	100 ppm
Propylene glycol monomethyl ether (CAS 107-98-2)	STEL	100 ppm
	TWA	50 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Dipropylene glycol monomethyl ether (CAS 34590-94-8)	STEL	900 mg/m3
		150 ppm
	TWA	600 mg/m3
		100 ppm
Propylene glycol monomethyl ether (CAS 107-98-2)	STEL	540 mg/m3
		150 ppm
	TWA	360 mg/m3
		100 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines

US - California OELs: Skin designation

Dipropylene glycol monomethyl ether (CAS 34590-94-8) Can be absorbed through the skin.
Propylene glycol monomethyl ether (CAS 107-98-2) Can be absorbed through the skin.

US - Tennessee OELs: Skin designation

Dipropylene glycol monomethyl ether (CAS 34590-94-8) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Dipropylene glycol monomethyl ether (CAS 34590-94-8) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

Dipropylene glycol monomethyl ether (CAS 34590-94-8) Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Dipropylene glycol monomethyl ether (CAS 34590-94-8) Can be absorbed through the skin.

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Where splashing of concentrate is a concern, use protective glasses with side shield.

Skin protection

Hand protection Not normally needed.

Other Not normally needed.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards None known.

General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	Clear, light blue liquid
Physical state	Liquid.
Form	Liquid.
Color	Light blue
Odor	non-objectionable odor
Odor threshold	Not available
pH	6 - 8
Melting point/freezing point	Not applicable / Not available
Initial boiling point and boiling range	200 °F (93.33 °C)
Flash point	> 200.0 °F (> 93.3 °C) Tag Closed Cup None to boiling
Evaporation rate	< 1 (ethyl ether = 1)
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	17.4 mm Hg
Vapor density	0.8 AIR=1
Relative density	0.99 at 77°F
Solubility(ies)	
Solubility (water)	100 complete
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Other information	
Density	8.24
Percent volatile	97.5 - 99.5 %
VOC (Weight %)	5 %

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity

Product	Species	Test Results
PRE-GAME		
Acute		
Dermal		
LD50	Rabbit	373.2144 g/kg estimated
Inhalation		
LC50	Rat	87781.3516 mg/l, 4 Hours estimated
Oral		
LD50	Mouse	17363.3438 g/kg estimated
	Rabbit	5377.8774 g/kg estimated
	Rat	205.9633 g/kg estimated

Components	Species	Test Results
Dipropylene glycol monomethyl ether (CAS 34590-94-8)		
Acute		
Dermal		
LD50	Rabbit	9.5 g/kg
Oral		
LD50	Rat	5.35 g/kg
Propylene glycol monomethyl ether (CAS 107-98-2)		
Acute		
Dermal		
LD50	Rabbit	13 g/kg
Inhalation		
LC50	Guinea pig	15000 mg/l, 10 Hours
	Rat	54.6 mg/l, 4 Hours
Oral		
LD50	Dog	4.6 g/kg
	Mouse	10.8 g/kg
	Rabbit	5.3 g/kg
	Rat	5.71 g/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Prolonged inhalation may be harmful.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Do not contaminate ponds, waterways or ditches with chemical or used container. Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Waste from normal product use may be sewered to a public owned treatment works (POTW) in compliance with applicable Federal, State, and local pretreatment requirements.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Triple rinse (or equivalent). Then offer clean, dry container for recycling or reconditioning.

14. Transport information

DOT

Not regulated as dangerous goods.

15. Regulatory information

US federal regulations

All components are on the U.S. EPA TSCA Inventory List.
This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Dipropylene glycol monomethyl ether (CAS 34590-94-8)
Propylene glycol monomethyl ether (CAS 107-98-2)

US. New Jersey Worker and Community Right-to-Know Act

Dipropylene glycol monomethyl ether (CAS 34590-94-8)
Propylene glycol monomethyl ether (CAS 107-98-2)

US. Pennsylvania Worker and Community Right-to-Know Law

Dipropylene glycol monomethyl ether (CAS 34590-94-8)
Propylene glycol monomethyl ether (CAS 107-98-2)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 03-18-2015

Version # 01

HMIS® ratings Health: 0
Flammability: 0
Physical hazard: 0

Disclaimer No representations or warranties, either express or implied, of merchantability, fitness for a particular purpose, or of any nature are made with respect to the product(s) or information contained in this material safety data sheet. The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate. The buyer or user assumes all risks associated with the use, misuse or disposal of this product. The buyer or user is responsible to comply with all federal, state or local regulations concerning the use, misuse or disposal of these products.

MATERIAL SAFETY DATA SHEET: PREMALUBE

Section I - General Information

(000000-000000- - 4464)

Date of Issue:
5/13/2005 12:00:00 AM

Supercedes:
11/10/2004 12:00:00 AM

Chemical Name & Synonyms:
N/A

Trade Name & Synonyms:
PREMALUBE

Chemical Family:
PETROLEUM MIXTURE

Formula is a mixture: [√]

Manufacturer Name:
CERTIFIED LABS, DIV. OF NCH CORP.

Manufacturer Address:
BOX 152170
IRVING, TEXAS 75015

Prepared By:
M McDowell/Chemist

Product Code Number:
4464

Emergency Phone Number:
800-424-9300

Section II - Hazardous Ingredients

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

Chemical Name (Ingredients)	Hazard	TLV	PEL	STEL	CAS #
ALUMINUM BENZOATE FATTY ACID COMPLEX	IRRITANT	N/E 1	N/E 2	N/E	82980-54-9
HYDROTREATED HEAVY NAPHTHENIC PETROLEUM DISTILLATE	IRRITANT	5 MG/M3 $1	5 MG/M3 $1	10 MG/M3$1	64742-52-5
MOLYBDENUM DISULFIDE	IRRITANT	3 MG/M3$$1	15MG/M3$$2	N/E	1317-33-5
TRICALCIUM PHOSPHATE	IRRITANT	N/E 1	N/E 2	N/E	7758-87-4
CALCIUM CARBONATE	IRRITANT	10 MG/M3 1	N/E 2	N/E	1317-65-3

$ OIL MIST VALUES
$$ MOLYBDENUM INSOLUBLE COMPOUNDS

Section III - Physical Data

Boiling Point (°F): 475°
Vapor Pressure (mm Hg): <0.01
Vapor Density (Air=1): >5
pH @ 100% : N/A
% Volatile by Volume: 0
H_20 Solubility: NEGLIGIBLE

Specific Gravity (H_20=1): 0.93
Color: BLACK
Odor: OILY
Clarity: OPAQUE
Evaporation Rate (BuAc=1): <1
Viscosity: SEMI-SOLID

Section IV - Fire and Explosion Hazard

Flash Point: 450°F
Flammable Limits: PETROLEUM OIL
LEL: N/E

Method Used: C.O.C.
UEL: N/E
Aerosol Level (NFPA 30B): N/A

Extinguishing Media:

[√] Foam [ ] Alcohol Foam [√] CO2
[√] Dry Chemical [√] Water Spray [ ] Other

NFPA 704 Hazard Rating:

4-Extreme
3-High
2-Moderate
1-Slight
0-Insignificant

Health: 1
Flammability: 1
Instability: 0
Special:

Special Fire Fighting Procedures: FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. COOL FIRE-EXPOSED CONTAINERS WITH WATER SPRAY TO PREVENT BURSTING.

Unusual Fire and Explosion Hazards: THE USE OF WATER SPRAY (F0G) WHILE EFFECTIVE, MAY CAUSE FROTHING AND FOAMING. NEVER USE A WATER JET AS THIS WILL JUST SPREAD THE FIRE. USE CARE AS SPILLS MAY BE SLIPPERY.

Section V - Health and Hazard Data

Threshold Limit Value:
NOT ESTABLISHED FOR MIXTURE. SEE SECTION II.

Effects of Overexposure:

Acute: (Short Term Exposure)
EYE CONTACT: MAY CAUSE IRRITATION SEEN AS STINGING, TEARING, AND REDNESS. SKIN CONTACT: MAY CAUSE IRRITATION SEEN AS ITCHING AND REDNESS. PROLONGED OR REPEATED CONTACT MAY CAUSE DRYING AND CHAPPING OF THE SKIN. INHALATION: MIST MAY CAUSE RESPIRATORY IRRITATION SEEN AS COUGHING AND SNEEZING. INGESTION: MAY CAUSE IRRITATION WITH POSSIBLE NAUSEA, VOMITING, AND DIARRHEA.

Chronic: (Long Term Exposure)
ON RARE OCCASIONS, PROLONGED AND REPEATED EXPOSURE TO HYDROCARBON MIST POSES A RISK OF CHRONIC LUNG INFLAMMATION. THIS CONDITION IS USUALLY ASYMPTOMATIC AS A RESULT OF REPEATED SMALL ASPIRATIONS. SHORTNESS OF BREATH AND COUGHING ARE THE MOST COMMON SYMPTOMS. ASPIRATION MAY LEAD TO PULMONARY EDEMA AND HEMORRHAGE AND MAY BE FATAL. SIGNS OF LUNG INVOLVEMENT INCLUDE INCREASED RESPIRATION AND HEART RATES AS WELL AS A BLUISH DISCOLORATION OF THE SKIN. CHRONIC SKIN CONTACT MAY PROMOTE DERMATITIS AND OIL ACNE. IN RARER CASES, AN INCREASED SENSTIVITY TO SUNLIGHT (PHOTOSENSITIVITY) MAY OCCUR. MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE ARE PRE-EXISTING RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA, AND DERMATITIS. TARGET ORGANS: NONE KNOWN. THERE IS NO PRIMARY ROUTE OF ENTRY INTO THE BODY. THE PRIMARY ROUTES OF EXPOSURE ARE SKIN AND EYE CONTACT.

Primary Routes of Entry

[ ] Inhalation [ ] Ingestion [ ] Absorption

Emergency First Aid Procedures:

Inhalation:
REMOVE FROM THE AREA TO FRESH AIR. SEEK MEDICAL ATTENTION IF RESPIRATORY IRRITATION DEVELOPS OR IF BREATHING BECOMES DIFFICULT.

Eye Contact:
RINSE THE EYES WITH WATER. REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING WITH PLENTY OF WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

Skin Contact:
WIPE AWAY MATERIAL WITH A CLOTH WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. WASH WITH SOAP AND WATER. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS. CLEAN CLOTHING AND SHOES.

Ingestion:
GIVE 3 TO 4 GLASSES OF WATER, BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. SEEK MEDICAL ATTENTION IF DISCOMFORT OCCURS.

Notes to Physician:
THERE IS NO SPECIFIC ANTIDOTE. TREAT THE PATIENT SYMPTOMATICALLY.

Section VI - Toxicity Information

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:

[ ] IARC [ ] NTP [ ] OSHA [ ] ACGIH [ ] Other

VOC CONTENT: 0% BY WEIGHT, 0% BY VOLUME, 0 G/L

ALUMINUM BENZOATE FATTY ACID COMPLEX
NO TOXICITY DATA AVAILABLE

HYDROTREATED HEAVY NAPHTHENIC PETROLEUM DISTILLATE
ORL-RAT LD50: >5 G/KG 3.
SKN-RBT LD50: >3 G/KG 3.
SKN-RBT IRRITATION <0.5/8.0; NO APPRECIABLE EFFECT 3.
EYE-RBT IRRITATION <15/110; NO APPRECIABLE EFFECT 3.

MINERAL OIL MISTS DERIVED FROM HIGHLY REFINED OILS ARE REPORTED TO HAVE LOW ACUTE AND SUB-ACUTE TOXICITIES IN ANIMALS. EFFECTS FROM SINGLE AND SHORT-TERM REPEATED EXPOSURES TO HIGH CONCENTRATIONS WELL ABOVE APPLICABLE WORKPLACE EXPOSURE LEVELS INCLUDE LUNG INFLAMMATORY REACTION, LIPOID GRANULOMA FORMATION, AND LIPOID PNEUMONIA. IN ACUTE AND SUB-ACUTE STUDIES INVOLVING EXPOSURES TO LOWER CONCENTRATIONS AT OR NEAR CURRENT WORK PLACE EXPOSURE LEVELS PRODUCED NO SIGNIFICANT TOXICOLOGICAL EFFECTS. IN LONG TERM STUDIES (UP TO TWO YEARS) NO CARCINOGENIC EFFECTS HAVE BEEN REPORTED IN ANY ANIMAL SPECIES TESTED. THESE PETROLEUM DISTILLATES ARE SEVERELY HYDROTREATED, SEVERELY SOLVENT EXTRACTED, AND/OR PROCESSED BY MILD HYDROTREATMENT AND EXTRACTION. FOR THIS REASON, THEY ARE NOT CLASSIFIED AS CANCER HAZARDS. 3.

MOLYBDENUM DISULFIDE
ORL-RAT LD50: >2 GM/KG 4.
IHL-RAT LC50: >2820 MG/M3/4H 4.
SKN-RAT LD50: >2 GM/KG 4.

TRICALCIUM PHOSPHATE
ORL-RAT LD50: >5000 MG/KG 3.
SKN-RBT LD50: >2000 MG/KG 3.
SKN-RBT: 500 MG MILDLY IRRITATING 3.
EYE-RBT: 100 MG SLIGHTLY IRRITATING 3.

CALCIUM CARBONATE
IHL-RAT TCL0: 84 MG/M3/4H/40W-I 4.
MILD TO MODERATE EYE IRRITANT 3.
MILD TO MODERATE SKIN IRRITANT 3.
ORL-RAT LD50: 6450 MG/KG 3.

Section VII - Reactivity Data

Stability

[√] Stable [ ] Unstable

Conditions to Avoid:
NONE KNOWN.

Hazardous Polymerization

[√] Will not occur [ ] May occur

Conditions to Avoid:
N/A

Incompatibility (Materials to Avoid):
STRONG OXIDIZING AGENTS SUCH AS CHLORINE BLEACH AND CONCENTRATED HYDROGEN PEROXIDE; STRONG ACIDS AND BASES, FORMS EXPLOSIVE MIXTURE WITH POTASSIUM NITRATE.

Hazardous Decomposition Products:
OXIDES OF CARBON AND SULFUR.

Section VIII - Spill Or Leak Procedures

Steps to be Taken if Material is Released or Spilled:
WEAR APPROPRIATE PROTECTIVE CLOTHING AND USE CARE AS SPILLS MAY BE SLIPPERY. FOR LARGE SPILLS, SCOOP INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL. FOR SMALL SPILLS, WIPE WITH A CLOTH AND TRANSFER ALL MATERIALS INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL.

Waste Disposal Method(s):
DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.

Neutralizing Agent:
N/A

Section IX - Special Protection Information

Required Ventilation:
GENERAL VENTILATION IS NORMALLY ADEQUATE. LOCAL VENTILATION IS RECOMMENDED TO CONTROL EXPOSURE FROM OPERATIONS THAT CAN GENERATE EXCESSIVE LEVELS OF MISTS. LOCAL VENTILATION IS PREFERRED, BECAUSE IT PREVENTS DISPERSION INTO WORK AREAS BY CONTROLLING IT AT ITS SOURCE.

Respiratory Protection:
RESPIRATORS SHOULD BE SELECTED BY AND USED UNDER THE DIRECTION OF A TRAINED HEALTH AND SAFETY PROFESSIONAL FOLLOWING REQUIREMENTS FOUND IN OSHA'S RESPIRATOR STANDARD (29 CFR 1910.134) AND ANSI'S STANDARD FOR RESPIRATORY PROTECTION (Z88.2-1992). FOR CONCENTRATIONS ABOVE THE TLV AND/OR PEL BUT LESS THAN 10 TIMES THESE LIMITS, A NIOSH APPROVED HALF-FACEPIECE RESPIRATOR EQUIPPED WITH APPROPRIATE CHEMICAL CARTRIDGES MAY BE USED. FOR CONCENTRATIONS GREATER THAN 10 TIMES THE TLV AND/OR PEL, CONSULT THE NIOSH RESPIRATOR DECISION LOGIC FOUND IN PUBLICATION NO. 87-116 OR ANSI Z88.2-1992.

Glove Protection:
NEOPRENE OR NITRILE RUBBER GLOVES IF REPEATED OR PROLONGED SKIN CONTACT IS LIKELY. ENSURE COMPLIANCE WITH OSHA'S PERSONAL PROTECTIVE EQUIPMENT (PPE) STANDARD FOR HAND PROTECTION, 29 CFR 1910.138.

Eye Protection:
SAFETY GLASSES WITH SIDE SHIELDS IF THE METHOD OF APPLICATION PRESENTS THE LIKELIHOOD OF EYE CONTACT. ENSURE COMPLIANCE WITH OSHA'S PERSONAL PROTECTIVE EQUIPMENT (PPE) STANDARD FOR EYE AND FACE PROTECTION, 29 CFR 1910.133.

Other Protection:
WEAR GENERAL-DUTY WORK CLOTHES AND SHOES. REMOVE OIL SOAKED CLOTHING AND SHOES. WASH CLOTHING AND CLEAN SHOES BEFORE REUSE. A SAFETY SHOWER AND AN EYEWASH STATION SHOULD BE AVAILABLE.

Section X - Storage and Handling Information

Storage Temperature		Storage Conditions			
Max: 150°F	Min: 10°F	[√] Indoors	[√] Outdoors	[ ] Heated	[ ] Refrigerated

Precautions to be Taken in Handling and Storing:
ALWAYS STORE MATERIAL IN ITS ORIGINAL CONTAINER. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. EMPTY CONTAINERS MAY CONTAIN PRODUCT RESIDUES WHICH MAY EXHIBIT THE HAZARDS OF THE PRODUCT. TO AVOID POSSIBLE EXPLOSION DO NOT PRESSURIZE, CUT, WELD, SOLDER, DRILL, GRIND, OR EXPOSE EMPTY CONTAINERS TO HEAT, HOT SURFACES, SPARKS, OR OPEN FLAMES. BULK STORAGE: FOR MAXIMUM PRODUCT LIFE, STORE INDOORS. OUTDOOR STORAGE TIP: STORE CONTAINERS ON THEIR SIDE TO HELP PREVENT WATER ACCUMULATION ON A FLAT END AND CONSEQUENT PRODUCT CONTAMINATION.

Other Precautions:
KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT. FOLLOW THE LABEL DIRECTIONS.

Section XI - Regulatory Information

Chemical Name	CAS Number	Upper % Limit
None.		

Those Ingredients listed above are subject to the reporting requirements of 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

Please call 1-800-527-9919 for additional information if you are a California customer. This MSDS is not intended for users in the state of California.

Section XII - References

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 2005. 2. OSHA PEL. 3. VENDOR'S MSDS. 4. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, CCINFOWeb, 2005.
ALL THE COMPONENTS OF THIS PRODUCT ARE IN COMPLIANCE WITH THE TOXIC SUBSTANCES CONTROL ACT (TSCA) AND ARE EITHER LISTED ON THE TSCA INVENTORY OR OTHERWISE EXEMPTED FROM LISTING. - IRR:IRRITANT, FLAM/FLAMM:FLAMMABLE, COMB:COMBUSTIBLE, CORR:CORROSIVE CARC:CARCINOGENIC, TOX:TOXIC, N/A:NOT APPLICABLE, N/E:NOT ESTABLISHED, COC:CLEVELAND OPEN CUP, PMCC:PENSKY-MARTIN CLOSED CUP, TCC:TAGLIABUE CLOSED CUP, LEL:LOWER EXPLOSION LIMIT, UEL:UPPER EXPLOSION LIMIT, NFPA:NATIONAL FIRE PROTECTION ASSOCIATION, IARC:INTERNATIONAL AGENCY FOR THE RESEARCH ON CANCER, NTP:NATIONAL TOXICOLOGY PROGRAM, OSHA:OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, ACGIH:AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS, TLV:THRESHOLD LIMIT VALUE, PEL:PERMISSIBLE EXPOSURE LIMIT, STEL:SHORT-TERM EXPOSURE LIMIT, MLD:MILD, MOD:MODERATE, SEV:SEVERE, MUT:MUTAGENIC, ASPHYX:ASPHYXIANT, PNOS:PARTICLES (INSOLUBLE) NOT OTHERWISE SPECIFIED, SDT:STANDARD DRAIZE TEST, ORL:ORAL, IHL:INHALATION, HMN:HUMAN

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

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DATE OF ISSUE	SUPERSEDES
11/12/2002	9/05/2001

SECTION I - GENERAL INFORMATION

CHEMICAL NAME & SYNONYMS	TRADE NAME & SYNONYMS
N/A	PREMALUBE WHITE AEROSOL
CHEMICAL FAMILY:	FORMULA
PETROLEUM	X <--MIXTURE

MANUFACTURE'S NAME:
CERTIFIED LABS. DIV. OF NCH CORP.

ADDRESS (NUMBER, STREET, CITY, STATE & ZIP CODE)
BOX 152170
IRVING, TEXAS 75015

PREPARED BY:	PRODUCT CODE NUMBER	EMERGENCY TELEPHONE NUMBER
L BOYNTON/CHEMIST	5317	800-424-9300

SECTION II - HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

CHEMICAL NAME (INGREDIENTS):				
SEVERELY REFINED MINERAL OIL				
HAZARD----->IRRITANT	TLV--->5 MG/M3	1.	PEL--->5 MG/M3	2.
STEL(TWA)*->10 MG/M3	CAS#-->8042-47-5			
N-HEXANE				
HAZARD----->FLAM/IRR.	TLV--->50 PPM	1.	PEL--->50 PPM	2.
STEL(TWA)*->N/E	CAS#-->110-54-3			
3-METHYLPENTANE				
HAZARD----->FLAM/IRR	TLV--->500 PPM	1.	PEL--->N/E	2.
STEL(TWA)*->1000 PPM	CAS#-->96-14-0			
2-METHYLPENTANE				
HAZARD----->FLAM/IRR	TLV--->500 PPM	1.	PEL--->N/E	2.
STEL(TWA)*->1000 PPM	CAS#-->107-83-5			
PROPANE				
HAZARD----->FLAM/ASPHX	TLV--->2500 PPM	1.	PEL--->1000 PPM	2.
STEL(TWA)*->N/E	CAS#-->74-98-6			
N-BUTANE				
HAZARD----->FLAM/ASPHY	TLV--->800 PPM	1.	PEL--->N/E	2.
STEL(TWA)*->N/E	CAS#-->106-97-6			
ZINC OXIDE				
HAZARD----->IRRITANT	TLV--->10 MG/M3	1.	PEL--->5 MG/M3	2.
STEL(TWA)*->N/E	CAS#-->1314-13-2			

SECTION III - PHYSICAL DATA

BOILING PT. (F)	152	SPEC. GRAVITY (H20=1)	0.82
VAPOR PR. (MM HG)	140	COLOR	WHITE
VAPOR DENSITY	>1	ODOR	PETROLEUM
PH. @ 100%	N/A	CLARITY	OPAQUE
% VOLATILE BY VOL	90	EVAPORATION RATE (BU A/C = 1)	9
H2O SOLUBILITY	NEGLIGIBLE		
VISCOSITY	VISCOUS		

SECTION IV - FIRE AND EXPLOSION HAZARD

FLASH POINT: 59° F. SETAFLASH	FLAMMABLE LIMITS HEXANE/PROPANE	LEL 1.1 %	UEL 9.0 %

EXTINGUISHING MEDIA

"ALCOHOL"		DRY	WATER	
X <--FOAM	<--FOAM	X <--CO2	X <--CHEMICAL	X <--SPRAY	<--OTHER

SPECIAL FIRE FIGHTING PROCEDURES:
FIREFIGHTERS SHOULD WEAR A SELF CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR.
COOL FIRE EXPOSED CONTAINERS WITH WATER SPRAY TO PREVENT BURSTING.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL TO DISTANT SOURCES OF IGNITION AND FLASHBACK. PRODUCT MAY PRODUCT A FLOATING FIRE HAZARD AS LIQUID FLOATS ON WATER. USE CARE AS SPILLS MAY BE SLIPPERY. FLAME EXTENSION IS >30 INCHES, BURNBACK IS 2 INCHES.

NFPA HAZARD RATING (0=INSIGNIFICANT; 1=SLIGHT; 2=MODERATE; 3=HIGH; 4=EXTREME):
1 <--HEALTH 3 <--FLAMMABILITY 0 <--INSTABILITY <--SPECIAL

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE:
NOT ESTABLISHED FOR MIXTURE. SEE SECTION II.

EFFECTS OF OVEREXPOSURE:

- ACUTE - (SHORT TERM EXPOSURE)

EYE CONTACT: MAY CAUSE IRRITATION SEEN AS TEARING AND REDNESS.
SKIN CONTACT: MAY CAUSE IRRITATION SEEN AS ITCHING AND REDNESS.
INHALATION: MAY CAUSE IRRITATION TO THE RESPIRATORY TRACT. AT HIGH HEXANE LEVELS, SYMPTOMS MAY INCLUDE HEADACHE, DIZZINESS, NAUSEA, LOSS OF CONCENTRATION, DROWSINESS, WEAKNESS, FATIGUE AND UNCONSCIOUSNESS. MAY CAUSE HEADACHE, DIZZINESS, NAUSEA, TIGHTNESS OF CHEST, METALLIC TASTE, FEVER, CHILLS AND DRY THROAT.
INGESTION: MAY CAUSE IRRITATION WITH POSSIBLE NAUSEA, VOMITING AND DIARRHEA.

- CHRONIC - (LONG TERM EXPOSURE)

CHRONIC EXPOSURE TO ZINC OXIDE MAY CAUSE NASOPHARYNGITIS AND LARYNGITIS. PROLONGED AND REPEATED INHALATION OF HEXANE MAY DAMAGE PERIPHERAL NERVE TISSUE (THAT OF ARMS AND LEGS) AND RESULT IN MUSCULAR WEAKNESS AND LOSS OF SENSATION IN THE EXTREMITIES. METHYL ETHYL KETONE MAY SPEED THE ONSET OF THIS EFFECT. ON RARE OCCASIONS, PROLONGED AND REPEATED EXPOSURE TO OIL MIST

SECTION V- HEALTH HAZARD DATA (CONTINUED)

- CHRONIC - (LONG TERM EXPOSURE) CONTINUED

POSES A RISK OF CHRONIC LUNG INFLAMMATION. THIS CONDITION IS USUALLY ASYMPTOMATIC AS A RESULT OF REPEATED SMALL ASPIRATIONS. SHORTNESS OF BREATH AND COUGHING ARE THE MOST COMMON SYMPTOMS. ASPIRATION MAY LEAD TO PULMONARY EDEMA AND HEMORRHAGE AND MAY BE FATAL. SIGNS OF LUNG INVOLVEMENT INCLUDE INCREASED RESPIRATION AND HEART RATES AS WELL AS A BLUISH DISCOLORATION OF THE SKIN. MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE ARE PRE-EXISTING RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA, DERMATITIS AND PRE-EXISTING LIVER AND KIDNEY DISEASES. TARGET ORGANS: LIVER, CENTRAL NERVOUS SYSTEM, TESTIS AND KIDNEYS.

PRIMARY ROUTE OF ENTRY: X<-- INHALATION <-- INGESTION <-- ABSORPTION

EMERGENCY & FIRST AID PROCEDURES

INHALATION:

REMOVE FROM THE AREA TO FRESH AIR. SEEK MEDICAL ATTENTION IF RESPIRATORY IRRITATION DEVELOPS OR IF BREATHING BECOMES DIFFICULT.

EYE CONTACT:

RINSE THE EYES WITH WATER. REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING WITH PLENTY OF WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

SKIN CONTACT:

WASH AFFECTED AREAS WITH PLENTY OF SOAP AND WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

INGESTION:

GIVE 3 TO 4 GLASSES OF WATER, BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. GET IMMEDIATE MEDICAL ATTENTION. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONCIOUS AND CONVULSING PERSON.

NOTES TO PHYSICIAN:

THERE IS NO SPECIFIC ANTIDOTE. TREAT THE PATIENT SYMPTOMATICALLY.

SECTION VI - TOXICITY INFORMATION

PRODUCT CONTAINS CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN BY:

IARC	<--YES	NTP	<--YES	OSHA	<--YES	ACGIH	<--YES	OTHER	<--YES
	X<--NO	NTP	X<--NO	OSHA	X<--NO	ACGIH	X<--NO	OTHER	X<--NO

SEVERELY REFINED MINERAL OIL

ORL-RAT LD50: >5000 MG/KG	4.
IHL-RAT LC50: 5.0 MG/L	4.
SKN-RBT LD50: >2000 MG/KG	4.
EYE-RBT SDT: NON-IRRITATING	4.
SKN-RBT SDT: NON-IRRITATING	4.
SKN-RBT 28D SUBCHRONIC: NON-IRRITATING	4.

N-HEXANE

ORL-RAT LD50: 12705 MG/KG	3.
IHL-HMN TCLO: 190 PPM/8W	3.
EYE-RBT SDT: 10 MG MILD	3.

3-METHYLPENTANE

NO TOXICITY DATA AVAILABLE

2-METHYLPENTANE

ORL-RAT TDLO: 10 GM/KG/4W-I	3.

SECTION VI - TOXICITY INFORMATION (CONTINUED)

PROPANE
NO TOXICITY DATA AVAILABLE

N-BUTANE

IHL-RAT LC50: 658 G/M3/4H	3.

ZINC OXIDE

EYE-RBT: 500 MG/24 MILD	3.
SKN-RBT: 500 MG/24 MILD	3.
ORL-HMN LDLO: 500 MG/KG	3.
IHL-HMN TCLO: 600 MG/KG	3.
ORL-MUS LD50: 7950 MG/KG	3.

SECTION VII - REACTIVITY DATA

STABILITY	X <--STABLE	<--UNSTABLE	CONDITIONS TO AVOID
	AVOID HEAT, HOT SURFACES, SPARKS AND OPEN FLAMES.		

INCOMPATABILITY (MATERIALS TO AVOID):
STRONG OXIDIZING AGENTS SUCH AS CHLORINE BLEACH AND CONCENTRATED HYDROGEN PEROXIDE, ACIDS AND ALKALIS.

HAZARDOUS DECOMPOSITION PRODUCTS:
OXIDES OF CARBON, VARIOUS HYDROCARBONS AND ZINC FUMES.

HAZARDOUS POLYMERIZATION	WILL NOT	MAY	CONDITIONS TO AVOID
	X <--OCCUR	<--OCCUR	
	N/A		

SECTION VIII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
DUE TO THE NATURE OF THE AEROSOL PACKAGING, A LARGE SPILL IS UNLIKELY. FOR A SMALL SPILL, ABSORB WITH AN INERT MATERIAL, VENTILATE THE AREA WELL AND TRANSFER ALL MATERIAL INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL. WEAR APPROPRIATE PROTECTIVE CLOTHING. USE CARE AS SPILLS MAY BE SLIPPERY.

WASTE DISPOSAL METHOD(S):
DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.

NEUTRALIZING AGENT:
NONE KNOWN.

SECTION IX - SPECIAL PROTECTION INFORMATION

REQUIRED VENTILATION:
LOCAL VENTILATION IS RECOMMENDED TO CONTROL EXPOSURE FROM OPERATIONS THAT CAN GENERATE MISTS OR VAPORS.

RESPIRATORY PROTECTION:
A NIOSH/MSHA APPROVED RESPIRATOR IN POORLY VENTILATED AREAS AND/OR FOR EXPOSURE ABOVE THE ACGIH TLV OR OSHA PEL OR WHERE MISTING EXISTS.

SECTION IX - SPECIAL PROTECTION INFORMATION (CONTINUED)

GLOVE PROTECTION:
NEOPRENE OR NITRILE RUBBER GLOVES IF REPEATED OR PROLONGED SKIN CONTACT IS LIKELY.

EYE PROTECTION:
SAFETY GLASSES WITH SIDE SHIELDS IF THE METHOD OF USE PRESENTS THE LIKELIHOOD OF EYE CONTACT.

OTHER PROTECTION:
NONE UNDER NORMAL CONDITIONS OF USE.

SECTION X - STORAGE AND HANDLING INFORMATION

STORAGE TEMPERATURE		INDOOR	HEATED	REFRIGERATED	OUTDOOR
MAX: 120 F.	MIN: 30 F.	X			

PRECAUTIONS TO BE TAKEN IN HANDLING & STORING
USE WITH CAUTION AROUND HEAT, SPARKS, PILOT LIGHTS, STATIC ELECTRICITY AND OPEN FLAME.

OTHER PRECAUTIONS
KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT. FOLLOW THE LABEL DIRECTIONS.

SECTION XI - REGULATORY INFORMATION

CHEMICAL NAME	C.A.S NUMBER	UPPER % LIMIT
N-HEXANE	110-54-3	15
ZINC COMPOUNDS	N/A	2

THOSE INGREDIENTS LISTED ABOVE ARE SUBJECT TO THE REPORTING REQUIREMENTS OF 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372.

SECTION XII – REFERENCES

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 2001.
2. OSHA PEL.
3. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, CCINFODISC, 2001.
4. VENDOR'S MSDS.

* SHORT TERM EXPOSURE LIMIT (TWA) LISTED AS FINAL RULE LIMITS PUBLISHED IN THE FEDERAL REGISTER/VOL. 54 NO. 12, 1-19-89

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THIS DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

CERTIFIED LABS. DIV. OF NCH CORP. ASSUMES NO RESPONSIBILTY FOR PERSONAL INJURY OR PROPERTY DAMAGE CAUSED BY THE USE, STORAGE OR DISPOSAL OF THE PRODUCT IN A MANNER NOT RECOMMENDED ON THE PRODUCT LABEL. USERS ASSUME ALL RISKS ASSOCIATED WITH SUCH UNRECOMMENDED USE, STORAGE, OR DISPOSAL OF THE PRODUCT.

MATERIAL SAFETY DATA SHEET

Complies with OSHA Hazard Communication Standard, 29 CFR 1910.1200

PRODUCT AND COMPANY INFORMATION

MASONRY STOP-LEAK
CP INDUSTRIES
560 N 500 W
SALT LAKE CITY, UT 84116
801-521-0313
EMERGENCY CONTACT 800-453-4931

N.F.P.A. & H.M.I.S RATING

HAZARD INDEX	HAZARD CLASS	
4 = Severe	Flammability	
3 = Serious	0	
2 = Moderate	Health	Reactivity
1 = Slight	1	0
0 = Minimal	Special Note	
	-	

HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components	CAS No.	PEL (OSHA) mg/M^3	TLV (ACGIH) mg/M^3
Silica Sand, crystalline	14808-60-7	10 %SiO_2+2	0.05 (respirable)
Portland Cement	65997-15-1	5	5
May Contain one or more of the following ingredients:			
Amorphous Silica	07631-86-9	80 mg/M3 % SiO_2	10
Calcium Sulfate	10101-41-4 or 13397-24-5	5	5
Lime	01305-62-0	5	5
Fly Ash	68131-74-8	5	5
Calcium Aluminate Cement	65997-16-2	5	5
Clay	01332-58-7	5	5
Pulverized Limestone	01317-65-3	5	5

Other Limits: National Institute for Occupational Safety and Health (NIOSH). Recommended standard maximum permissible concentration=0.05 mg/M^3 (respirable free silica) as determined by a full-shift sample up to 10-hour working day, 40-hour work week. See NIOSH Criteria for a Recommended Standard Occupational Exposure to Crystalline Silica.

TRANSPORATION INFORMATION—NA

PHYSICAL CHEMICAL CHARACTERISTICS

Appearance: grew powder with small aggregate.
Specific Gravity: 2.6 to 3.15 **Melting Point:** >2700^{0}F **Boiling Point:** >2700^{0}F
Vapor Pressure: None **Vapor Density:** None **Evaporation Rate:** None
Solubility in Water: Slight **Odor:** None

FIRE AND EXPLOSION HAZARD DATA

Flammability: Noncombustible and not explosive.

REACTIVITY DATA

Stability: Stable.
Incompatibility (Materials to Avoid): Contact of silica with powerful oxidizing agents such as fluorine, chlorine trifluoride, manganese trioxide, oxygen difluoride, may cause fires.
Hazardous Decomposition or By-products: Silica will dissolve in Hydrofluoric Acid and produce a corrosive gas - silicon tetrafluoride.
Hazardous Polymerization: Will Not Occur.
Condition to Avoid: Keep dry until used to preserve product utility.

HEALTH HAZARD DATA

Route(s) of Entry: Inhalation, Skin, Ingestion
Acute Exposure: Product becomes alkaline when exposed to moisture. Exposure can dry the skin, cause alkali burns and effect the mucous membranes. Dust can irritate the eyes and upper respiratory system. Toxic effects noted in animals include, for acute exposures, alveolar damage with pulmonary edema.
Chronic Exposure: Dust can cause inflammation of the lining tissue of the interior of the nose and inflammation of the cornea. Hypersensitive individuals may develop an allergic dermatitis. Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs and possibly cancer. There is evidence that exposure to respirable silica or the disease silicosis is associated with an increased incidence of Scleroderma, tuberculosis and kidney disorders.
Carcinogenicity Listings:
NTP: Known carcinogen
OSHA: Not listed as a carcinogen
IARC Monographs: Group 1 Carcinogen
California Proposition 65: Known carcinogen
NTP: The National Toxicology Program, in its "Ninth Report on Carcinogens" (released May 15, 2000) concluded that "Respirable crystalline silica (RCS), primarily quartz dusts occurring in industrial and occupational settings, is *known to be a human carcinogen*, based on sufficient evidence of carcinogenicity from studies in humans indicating a causal relationship between

exposure to RCS and increased lung cancer rates in workers exposed to crystalline silica dust (reviewed in IAC, 1997; Brown *et al*., 1997; Hind *et al*., 1997)

IARC: The International Agency for Research on Cancer ("IARC") concluded that there was "*sufficient evidence* in humans for the carcinogenicity of crystalline silica in the forms of quartz or cristobalite from occupational sources", and that there is "*sufficient evidence* in experimental animals for the carcinogenicity of quartz or cristobalite." The overall IARC evaluation was that "crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is *carcinogenic to humans (*Group 1)." The IARC evaluation noted that "carcinogenicity was not detected in all industrial circumstances or studies. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." For further information on the IARC evaluation, see IARC Monographs on the Evaluation of carcinogenic Risks to Humans, Volume 68, "Silica, Some Silicates..." (1997)

Signs and Symptoms of Exposure: Symptoms of excessive exposure to the dust include shortness of breath and reduced pulmonary function. Excessive exposure to skin and eyes especially when mixed with water can cause caustic burns as severe as third degree.

Medical Conditions Generally Aggravated by Exposure: Individuals with sensitive skin and with pulmonary and/or respiratory disease, including, but not limited to, asthma and bronchitis, or subject to eye irritation, should be precluded from exposure. Exposure to crystalline silica or the disease silicosis is associated with increased incidence of scleroderma, Tuberculosis and possibly increased incidence of kidney lesions.

Emergency First Aid Procedures:

Eyes: Immediately flush eye thoroughly with water. Continue flushing eye for at least 15 minutes, including under lids, to remove all particles. Call physician immediately.

Skin: Wash skin with cool water and pH-neutral soap or a mild detergent. Seek medical treatment if irritation or inflammation develops or persists. Seek immediate medical treatment in the event of burns.

Inhalation: Remove person to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. Seek medical help if coughing and other symptoms do not subside. Inhalation of large amounts of portland cement require immediate medical attention.

Ingestion: Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediate

PRECAUTIONS FOR SAFE HANDLING AND USE

Spills: If spilled, use dustless methods (vacuum) and place into covered container for disposal or use if not contaminated or wet. Use adequate ventilation.

Waste Disposal Method: The packaging and material may be land filled; however, material should be covered to minimize generation of airborne dust. This product is not classified as a hazardous waste under RCRA or CERCLA.

CONTROL MEASURES

Inhalation: DO NOT BREATH DUST. In dusty environments, the use of an OSHA, MSHA or NIOSH approved respirator is recommended. Local exhaust can be used, if necessary, to control airborne dust levels.

Eyes: Wear tight fitting goggles.

Skin: The use of barrier creams or impervious gloves, boots and clothing to protect the skin from contact is recommended. Following work, workers should shower with soap and water. Precautions must be observed because burns occur with little warning -- little heat is sensed.
WARN EMPLOYEES AND/OR CUSTOMERS OF THE HAZARDS AND REQUIRED OSHA PRECAUTIONS ASSOCIATED WITH THE USE OF THIS PRODUCT.

OTHER

NOTE: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products. Customers-users must comply with all applicable health and safety laws, regulations and orders covering silica.

DATE PREPARED JANUARY 2, 2007
BY RICH OTTERSTROM CP INDUSTRIES CHEMIST

Close this window MSDS

Common Name: CONCRETE THIN CRACK FILLER
Manufacturer: CP INDUSTRIES
MSDS Revision Date: 1/2/2007

Grainger Item Number(s): 3FE75
Manufacturer Model Number(s): CCT0QTBT

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OTHER

MATERIAL SAFETY DATA SHEET

COMPLIES WITH OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200

PRODUCT AND COMPANY INFORMATION

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CONCRETE THIN CRACK FILLER
CP INDUSTRIES

560 N 500 W
SALT LAKE CITY, UT 84116
801-521-0313

EMERGENCY CONTACT: 800-453-4931

N.F.P.A. & H.M.I.S. RATING:

HAZARD CLASS:
HEALTH 1
FLAMMABILITY 0
REACTIVITY 0
SPECIAL NOTE

HAZARD INDEX:
4-SEVERE
3-SERIOUS
2-MODERATE
1-SLIGHT
0-MINIMAL

HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

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INGREDIENTS	OSHA PEL	ACGIH TLV	OTHER LIMITS	PERCENT
STYRENE ACRYLIC EMULSION	N/A			36-41
CALCIUM CARBONATE CAS #: 1317-65-3		5 MG/M3		53-57
REOLOGICAL ADDITIVES	MIXTURE			0.0-5.0
OCTYLPHENONYPOLYETHOXYETHANOL CAS #: 9036-19-5				0.0-0.5
AQUA AMMONIA CAS #: 1336-21-6		50PPM		0.0-0.1

TRANSPORTATION INFORMATION - NA

PHYSICAL CHEMICAL CHARACTERISTICS

top

BOILING POINT: 212 DEG. F

SPECIFIC GRAVITY (H2O=1): 1.62

VAPOR PRESSURE (MMHg): NA

MELTING POINT: 13.5

VAPOR DENSITY (AIR =1): NA

EVAPORATION (BUTYL ACETATE =1): NA

SOLUBILITY:

APPEARANCE: CONCRETE GRAY LIQUID; SLIGHT AMMONIA ODOR

FIRE AND EXPLOSION HAZARD DATA

top

FLASH POINT (TAG CLOSED CUP): NA

FLAMMABLE LIMITS: NA

EXTINGUISHING MEDIA: NA

SPECIAL FIRE FIGHTING PROCEDURES:
PERSONS EXPOSED TO PRODUCTS OF COMBUSTION SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE EQUIPMENT.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
THERE IS A POSSIBILITY OF PRESSURE BUILD-UP IN CLOSED CONTAINERS WHEN HEATED. WATER SPRAY MAY BE USED TO COOL THE CONTAINERS.

REACTIVITY DATA

top

STABILITY: STABLE

CONDITIONS TO AVOID: NONE

INCOMPATIBILITY (MATERIAL TO AVOID): NONE

HAZARDOUS DECOMPOSITION (BYPRODUCTS):
INCOMPLETE COMBUSTION CAN YIELD LOW MOLECULAR WEIGHT HYDROCARBONS AND CARBON MONOXIDE.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

HEALTH HAZARD DATA

top

ROUTES OF ENTRY:
INHALATION? NO
SKIN? YES
INGESTION? NO

HEALTH HAZARDS (ACUTE AND CHRONIC):
SKIN CONTACT: NA

EYE CONTACT: NA

INHALATION:
REPEATED INHALATION OF RESPIRABLE DUST FOR EXTENDED PERIODS OF TIME MAY CAUSE INJURY TO LUNGS.

INGESTION: NA

CARCINOGENICTIY: NA
NTP: ? NO
IARC: MONOGRAPHS? NO
OSHA: REGULATED? NO

SIGNS AND SYMPTOMS OF EXPOSURE:
EYE CONTACT: SEVERE IRRITATION, POSSIBLE PERMANENT EYE INJURY.
SKIN CONTACT: CAUSES IRRITATION.

EMERGENCY AND FIRST AID PROCEDURES:
SKIN: WASH THOROUGHLY WITH SOAP AND WATER.
EYES: FLUSH WITH WATER FOR 15 MINUTES. CALL A PHYSICIAN.
INHALATION: NA
INGESTION: IF INGESTED, IMMEDIATELY CONTACT A PHYSICIAN.

PRECAUTIONS FOR SAFE HANDLING AND USE

top

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
RECOVER FREE PRODUCT. ADD ABSORBENT TO SPILL AREA. PREVENT PRODUCT FROM ENTERING SEWER OR WATERWAYS.

WASTE DISPOSAL METHOD:
PERMITTED LANDFILL WASTE DISPOSAL SYSTEM. CONSULT LOCAL ORDINANCE FOR COMPLIANCES.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: KEEP FROM FREEZING.

OTHER PRECAUTIONS: NA

CONTROL MEASURES

top

RESPIRATORY PROTECTION: N/A

VENTILATION: NA

PROTECTIVE GLOVES: CHEMICAL RESISTANT GLOVES.

EYE PROTECTION: CHEMICAL SPLASH GOGGLES

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:
TO PREVENT PROLONGED SKIN CONTACT, WEAR PROTECTIVE CLOTHING AND BOOTS.

WORK/HYGIENIC PRACTICES:
WASH THOROUGHLY WITH SOAP AND WATER BEFORE EATING, SMOKING OR USING WASHROOM. REMOVE AND WASH CONTAMINATED CLOTHING BEFORE RE-USE.

OTHER

top

COMMENTS:
THIS MATERIAL SAFETY DATA SHEET AND THE INFORMATION IT CONTAINS IS OFFERED TO YOU IN GOOD FAITH AS ACCURATE. WE HAVE REVIEWED ANY INFORMATION CONTAINED IN THIS DATA SHEET THAT WE RECEIVED FROM SOURCES OUTSIDE OUR COMPANY. WE BELIEVE THAT INFORMATION TO BE CORRECT, BUT CANNOT GUARANTEE ITS ACCURACY OR COMPLETENESS. HEALTH AND SAFETY PRECAUTIONS IN THIS DATA SHEET MAY NOT BE ADEQUATE FOR ALL INDIVIDUALS AND/OR SITUATIONS. IT IS THE USER'S OBLIGATION TO EVALUATE AND USE THIS PRODUCT SAFELY AND TO COMPLY WITH ALL APPLICABLE LAWS AND REGULATIONS. NO STATEMENT MADE IN THIS DATA SHEET SHALL BE CONSTRUED AS A PERMISSION OR RECOMMENDATION FOR THE USE OF THIS PRODUCT IN A MANNER THAT MIGHT INFRINGE EXISTING PATENTS.
NO WARRANTY IS MADE, EITHER EXPRESSED OR IMPLIED.

DATE PREPARED: JANUARY 2, 2007

BY RICH OTTERSTROM CP INDUSTRIES CHEMIST

Close this window MSDS

Common Name: CONCRETE WIDE CRACK FILLER
Manufacturer: CP INDUSTRIES
MSDS Revision Date: 1/2/2007

Grainger Item Number(s): 3FE76
Manufacturer Model Number(s): CCR005PL

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COMPLIES WITH OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200

PRODUCT AND COMPANY INFORMATION

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CONCRETE WIDE CRACK FILLER

CP INDUSTRIES
560 N 500 W
SALT LAKE CITY, UT 84116
801-521-0313

EMERGENCY CONTACT: 800-453-4931

N.F.P.A. & H.M.I.S. RATING:

HAZARD INDEX:
4 = SEVERE
3 = SERIOUS
2 = MODERATE
1 = SLIGHT
0 = MINIMAL

HAZARD CLASS:
HEALTH 1
FLAMMABILITY 0
REACTIVITY 0
SPECIAL NOTE

HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

top

HAZARDOUS COMPONENTS	CAS NO.	PEL (OSHA)	TLV (ACGIH)

		MG/M3	MG/M3
SILICA SAND, CRYSTALLINE	14808-60-7	10 %SiO2 +2	0.05 (RESPIRABLE)
PORTLAND CEMENT	65997-15-1	5	5
MAY CONTAIN ONE OR MORE OF THE FOLLOWING INGREDIENTS:			
AMORPHOUS SILICA	07631-86-9	80 MG/M3 % SiO2	10
CALCIUM SULFATE	10101-41-4 OR 13397-24-5	5	5
LIME	01305-62-0	5	5
FLY ASH	68131-74-8	5	5
CALCIUM ALUMINATE CEMENT	65997-16-2	5	5
CLAY	01332-58-7	5	5
PULVERIZED LIMESTONE	01317-65-3	5	5

OTHER LIMITS:
NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH). RECOMMENDED

STANDARD MAXIMUM PERMISSIBLE CONCENTRATION=0.05 MG/M3 (RESPIRABLE FREE SILICA) AS DETERMINED BY A FULL-SHIFT SAMPLE UP TO 10-HOUR WORKING DAY, 40-HOUR WORK WEEK. SEE NIOSH CRITERIA FOR A RECOMMENDED STANDARD OCCUPATIONAL EXPOSURE TO CRYSTALLINE SILICA.

TRANSPORATION INFORMATION: NA

PHYSICAL CHEMICAL CHARACTERISTICS

top

APPEARANCE: GREW POWDER WITH SMALL AGGREGATE.

SPECIFIC GRAVITY: 2.6 TO 3.15

MELTING POINT: >2700 DEG. F

BOILING POINT: >2700 DEG. F

VAPOR PRESSURE: NONE

VAPOR DENSITY: NONE

EVAPORATION RATE: NONE

SOLUBILITY IN WATER: SLIGHT

ODOR: NONE

FIRE AND EXPLOSION HAZARD DATA

top

FLAMMABILITY: NONCOMBUSTIBLE AND NOT EXPLOSIVE.

REACTIVITY DATA

top

STABILITY: STABLE.

INCOMPATIBILITY (MATERIALS TO AVOID):
CONTACT OF SILICA WITH POWERFUL OXIDIZING AGENTS SUCH AS FLUORINE, CHLORINE TRIFLUORIDE, MANGANESE TRIOXIDE, OXYGEN DIFLUORIDE, MAY CAUSE FIRES.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:
SILICA WILL DISSOLVE IN HYDROFLUORIC ACID AND PRODUCE A CORROSIVE GAS - SILICON TETRAFLUORIDE.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

CONDITION TO AVOID: KEEP DRY UNTIL USED TO PRESERVE PRODUCT UTILITY.

HEALTH HAZARD DATA

top

ROUTE(S) OF ENTRY: INHALATION, SKIN, INGESTION

ACUTE EXPOSURE:
PRODUCT BECOMES ALKALINE WHEN EXPOSED TO MOISTURE. EXPOSURE CAN DRY THE SKIN, CAUSE ALKALI BURNS AND EFFECT THE MUCOUS MEMBRANES. DUST CAN IRRITATE THE EYES AND UPPER RESPIRATORY SYSTEM. TOXIC EFFECTS NOTED IN ANIMALS INCLUDE, FOR ACUTE EXPOSURES, ALVEOLAR DAMAGE WITH PULMONARY EDEMA.

CHRONIC EXPOSURE:

DUST CAN CAUSE INFLAMMATION OF THE LINING TISSUE OF THE INTERIOR OF THE NOSE AND INFLAMMATION OF THE CORNEA. HYPERSENSITIVE INDIVIDUALS MAY DEVELOP AN ALLERGIC DERMATITIS.

RESPIRABLE CRYSTALLINE SILICA (QUARTZ) CAN CAUSE SILICOSIS, A FIBROSIS (SCARRING) OF THE LUNGS AND POSSIBLY CANCER. THERE IS EVIDENCE THAT EXPOSURE TO RESPIRABLE SILICA OR THE DISEASE SILICOSIS IS ASSOCIATED WITH AN INCREASED INCIDENCE OF SCLERODERMA, TUBERCULOSIS AND KIDNEY DISORDERS.

CARCINOGENICITY LISTINGS:
NTP: KNOWN CARCINOGEN
OSHA: NOT LISTED AS A CARCINOGEN
IARC MONOGRAPHS: GROUP 1 CARCINOGEN

CALIFORNIA PROPOSITION 65: KNOWN CARCINOGEN

NTP:
THE NATIONAL TOXICOLOGY PROGRAM, IN ITS "NINTH REPORT ON CARCINOGENS" (RELEASED MAY 15, 2000) CONCLUDED THAT "RESPIRABLE CRYSTALLINE SILICA (RCS), PRIMARILY QUARTZ DUSTS OCCURRING IN INDUSTRIAL AND OCCUPATIONAL SETTINGS, IS KNOWN TO BE A HUMAN CARCINOGEN, BASED ON SUFFICIENT EVIDENCE OF CARCINOGENICITY FROM STUDIES IN HUMANS INDICATING A CAUSAL RELATIONSHIP BETWEEN EXPOSURE TO RCS AND INCREASED LUNG CANCER RATES IN WORKERS EXPOSED TO CRYSTALLINE SILICA DUST (REVIEWED IN IAC, 1997; BROWN ET AL., 1997; HIND ET AL., 1997)

IARC:
THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER ("IARC") CONCLUDED THAT THERE WAS "SUFFICIENT EVIDENCE IN HUMANS FOR THE CARCINOGENICITY OF CRYSTALLINE SILICA IN THE FORMS OF QUARTZ OR CRISTOBALITE FROM OCCUPATIONAL SOURCES", AND THAT THERE IS "SUFFICIENT EVIDENCE IN EXPERIMENTAL ANIMALS FOR THE CARCINOGENICITY OF QUARTZ OR CRISTOBALITE." THE OVERALL IARC EVALUATION WAS THAT "CRYSTALLINE SILICA INHALED IN THE FORM OF QUARTZ OR CRISTOBALITE FROM OCCUPATIONAL SOURCES IS CARCINOGENIC TO HUMANS (GROUP 1)." THE IARC EVALUATION NOTED THAT "CARCINOGENICITY WAS NOT DETECTED IN ALL INDUSTRIAL CIRCUMSTANCES OR STUDIES. CARCINOGENICITY MAY BE DEPENDENT ON INHERENT CHARACTERISTICS OF THE CRYSTALLINE SILICA OR ON EXTERNAL FACTORS AFFECTING ITS BIOLOGICAL ACTIVITY OR DISTRIBUTION OF ITS POLYMORPHS." FOR FURTHER INFORMATION ON THE IARC EVALUATION, SEE IARC MONOGRAPHS ON THE EVALUATION OF CARCINOGENIC RISKS TO HUMANS, VOLUME 68, "SILICA, SOME SILICATES..."(1997)

SIGNS AND SYMPTOMS OF EXPOSURE:
SYMPTOMS OF EXCESSIVE EXPOSURE TO THE DUST INCLUDE SHORTNESS OF BREATH AND REDUCED PULMONARY FUNCTION. EXCESSIVE EXPOSURE TO SKIN AND EYES ESPECIALLY WHEN MIXED WITH WATER CAN CAUSE CAUSTIC BURNS AS SEVERE AS THIRD DEGREE.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:
INDIVIDUALS WITH SENSITIVE SKIN AND WITH PULMONARY AND/OR RESPIRATORY DISEASE, INCLUDING, BUT NOT LIMITED TO, ASTHMA AND BRONCHITIS, OR SUBJECT TO EYE IRRITATION, SHOULD BE PRECLUDED FROM EXPOSURE. EXPOSURE TO CRYSTALLINE SILICA OR THE DISEASE SILICOSIS IS ASSOCIATED WITH INCREASED INCIDENCE OF SCLERODERMA, TUBERCULOSIS AND POSSIBLY INCREASED INCIDENCE OF KIDNEY LESIONS.

EMERGENCY FIRST AID PROCEDURES:

EYES:
IMMEDIATELY FLUSH EYE THOROUGHLY WITH WATER. CONTINUE FLUSHING EYE FOR AT LEAST 15 MINUTES, INCLUDING UNDER LIDS, TO REMOVE ALL PARTICLES. CALL PHYSICIAN IMMEDIATELY.

SKIN:
WASH SKIN WITH COOL WATER AND pH-NEUTRAL SOAP OR A MILD DETERGENT. SEEK MEDICAL TREATMENT IF IRRITATION OR INFLAMMATION DEVELOPS OR PERSISTS. SEEK IMMEDIATE MEDICAL TREATMENT IN THE EVENT OF BURNS.

INHALATION:
REMOVE PERSON TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. SEEK MEDICAL HELP IF COUGHING AND OTHER SYMPTOMS DO NOT SUBSIDE. INHALATION OF LARGE AMOUNTS OF PORTLAND CEMENT REQUIRE IMMEDIATE MEDICAL ATTENTION.

INGESTION:
DO NOT INDUCE VOMITING. IF CONSCIOUS, HAVE THE VICTIM DRINK PLENTY OF WATER AND CALL A PHYSICIAN IMMEDIATE

PRECAUTIONS FOR SAFE HANDLING AND USE:

SPILLS:
IF SPILLED, USE DUSTLESS METHODS (VACUUM) AND PLACE INTO COVERED CONTAINER FOR DISPOSAL OR USE IF NOT CONTAMINATED OR WET. USE ADEQUATE VENTILATION.

WASTE DISPOSAL METHOD:
THE PACKAGING AND MATERIAL MAY BE LAND FILLED; HOWEVER, MATERIAL SHOULD BE COVERED TO MINIMIZE GENERATION OF AIRBORNE DUST. THIS PRODUCT IS NOT CLASSIFIED AS A HAZARDOUS WASTE UNDER RCRA OR CERCLA.

CONTROL MEASURES:

INHALATION:
DO NOT BREATH DUST. IN DUSTY ENVIRONMENTS, THE USE OF AN OSHA, MSHA OR NIOSH APPROVED RESPIRATOR IS RECOMMENDED. LOCAL EXHAUST CAN BE USED, IF NECESSARY, TO CONTROL AIRBORNE DUST LEVELS.

EYES: WEAR TIGHT FITTING GOGGLES.

SKIN:
THE USE OF BARRIER CREAMS OR IMPERVIOUS GLOVES, BOOTS AND CLOTHING TO PROTECT THE SKIN FROM CONTACT IS RECOMMENDED. FOLLOWING WORK, WORKERS SHOULD SHOWER WITH SOAP AND WATER.

PRECAUTIONS MUST BE OBSERVED BECAUSE BURNS OCCUR WITH LITTLE WARNING - LITTLE HEAT IS SENSED.

WARN EMPLOYEES AND/OR CUSTOMERS OF THE HAZARDS AND REQUIRED OSHA PRECAUTIONS ASSOCIATED WITH THE USE OF THIS PRODUCT.

OTHER:

NOTE:

THE INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BASED UPON DATA BELIEVED TO BE CORRECT. HOWEVER, NO GUARANTEE OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, IS MADE WITH RESPECT TO THE INFORMATION CONTAINED HEREIN. WE ACCEPT NO RESPONSIBILITY AND DISCLAIM ALL LIABILITY FOR ANY HARMFUL EFFECTS WHICH MAY BE CAUSED BY EXPOSURE TO SILICA CONTAINED IN OUR PRODUCTS.

CUSTOMERS-USERS MUST COMPLY WITH ALL APPLICABLE HEALTH AND SAFETY LAWS, REGULATIONS AND ORDERS COVERING SILICA.

DATE PREPARED JANUARY 2, 2007

BY RICH OTTERSTROM CP INDUSTRIES CHEMIST

CP Industries
560 North 500 West
Salt Lake City, Utah 84116
(801) 521-0313
(800) 453-4931
(801) 539-0510 FAX

MATERIAL SAFETY DATA SHEET

Product name: Premiere Ice Melter

Date prepared: January 2, 2002

Hazardous ingredients:
No substances defined as hazardous present.

Other ingredients:

Sodium chloride	CAS 7647-14-5
Calcium magnesium acetate (CMA)	CAS 76123-46-1
Sodium silicates	CAS 6834-92-0
Ethanol amines	CAS 102-71-6

Physical/ chemical characteristics:
Solubility in water: soluble
Appearance and odor: blue crystalline solid

Reactivity data:
Hazardous polymerization: cannot occur
Stability: stable
Incompatibility: avoid contact with strong oxidizing agents.

Health hazard data:
Eye irritant. May irritate skin. May be harmful if swallowed, especially in large amounts. Ingestion of small amounts may be irritating because of presence of a small amount of alkaline salts.

First aid procedures:
Eyes: flush with water. If irritation or redness are severe or persist, consult physician.
Skin: wash off with water.
Ingestion: drink liquids to dilute and consult a physician.

Spill or leak procedures:
Small spills: may be flushed away with water or swept up.
Large spills: sweep or scoop up for reuse or disposal.

Waste disposal methods:
Small spills: may be sewered.
Large spills: should be disposed of in landfill according to regulations.

Protective equipment to be used:
Eye protection: wear chemical safety goggles to prevent eye contact. Have eye baths immediately available where eye contact can occur.
Skin protection: wear appropriate impervious gloves and protective clothing to prevent skin contact.
Respiratory protection: use OSHA approved equipment with full face piece when airborne exposure limits are exceeded.
Ventilation: provide ventilation to minimize exposure. Local exhaust ventilation preferred.

Special precautions or other comments: Containers of this material may be hazardous when emptied since emptied containers retain product residues (vapor, liquid and/ or solid). All hazard precautions given in the data sheet must be observed.

Note: The information herein is believed to be efficacious and accurate; however, no warranty is made with respect thereto. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. Prepared to comply with the OSHA hazard communication standard (29CFR 1910.1200)

Close this window MSDS

Common Name: VINYL CONCRETE PATCH
Manufacturer: CP INDUSTRIES
MSDS Revision Date: 1/2/2007

Grainger Item Number(s): 3FE83, 3FE84
Manufacturer Model Number(s): CVC020PL, CVC050PL

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MATERIAL SAFETY DATA SHEET

COMPLIES WITH OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200

PRODUCT AND COMPANY INFORMATION

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VINYL CONCRETE PATCH
CP INDUSTRIES
560 N 500 W
SALT LAKE CITY, UT 84116
801-521-0313

EMERGENCY CONTACT: 800-453-4931

N.F.P.A. & H.M.I.S. RATING:

HAZARD INDEX:
4 = SEVERE
3 = SERIOUS
2 = MODERATE
1 = SLIGHT
0 = MINIMAL

HAZARD CLASS:
HEALTH 1
FLAMMABILITY 0
REACTIVITY 0
SPECIAL NOTE

HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

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HAZARDOUS COMPONENTS	CAS NO.	PEL (OSHA) MG/M3	TLV (ACGIH) MG/M3
SILICA SAND, CRYSTALLINE	14808-60-7	10 %SiO2 +2	0.05 (RESPIRABLE)
PORTLAND CEMENT	65997-15-1	5	5
MAY CONTAIN ONE OR MORE OF THE FOLLOWING INGREDIENTS:			
AMORPHOUS SILICA	07631-86-9	80 MG/M3 % SiO2	10
CALCIUM SULFATE	10101-41-4 OR 13397-24-5	5	5
LIME	01305-62-0	5	5
FLY ASH	68131-74-8	5	5
CALCIUM ALUMINATE CEMENT	65997-16-2	5	5
CLAY	01332-58-7	5	5
PULVERIZED LIMESTONE	01317-65-3	5	5

OTHER LIMITS:
NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH). RECOMMENDED STANDARD MAXIMUM PERMISSIBLE CONCENTRATION =0.05 MG/M (RESPIRABLE FREE SILICA) AS DETERMINED BY A FULL-SHIFT SAMPLE UP TO 10-HOUR WORKING DAY, 40-HOUR WORK WEEK. SEE NIOSH CRITERIA FOR A RECOMMENDED STANDARD OCCUPATIONAL EXPOSURE TO CRYSTALLINE SILICA.

TRANSPORATION INFORMATION: NA

PHYSICAL CHEMICAL CHARACTERISTICS

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APPEARANCE: GREW POWDER WITH SMALL AGGREGATE.

SPECIFIC GRAVITY: 2.6 TO 3.15

MELTING POINT: >2700 DEG. F

BOILING POINT: >2700 DEG. F

VAPOR PRESSURE: NONE

VAPOR DENSITY: NONE

EVAPORATION RATE: NONE

SOLUBILITY IN WATER: SLIGHT

ODOR: NONE

FIRE AND EXPLOSION HAZARD DATA

top

FLAMMABILITY: NONCOMBUSTIBLE AND NOT EXPLOSIVE.

REACTIVITY DATA

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STABILITY: STABLE.

INCOMPATIBILITY (MATERIALS TO AVOID):
CONTACT OF SILICA WITH POWERFUL OXIDIZING AGENTS SUCH AS FLUORINE, CHLORINE TRIFLUORIDE, MANGANESE TRIOXIDE, OXYGEN DIFLUORIDE, MAY CAUSE FIRES.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:
SILICA WILL DISSOLVE IN HYDROFLUORIC ACID AND PRODUCE A CORROSIVE GAS - SILICON TETRAFLUORIDE.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

CONDITION TO AVOID: KEEP DRY UNTIL USED TO PRESERVE PRODUCT UTILITY.

HEALTH HAZARD DATA

top

ROUTE(S) OF ENTRY: INHALATION, SKIN, INGESTION

ACUTE EXPOSURE:
PRODUCT BECOMES ALKALINE WHEN EXPOSED TO MOISTURE. EXPOSURE CAN DRY THE SKIN, CAUSE ALKALI BURNS AND EFFECT THE MUCOUS MEMBRANES. DUST CAN IRRITATE THE EYES AND UPPER RESPIRATORY SYSTEM. TOXIC EFFECTS NOTED IN ANIMALS INCLUDE, FOR ACUTE EXPOSURES, ALVEOLAR DAMAGE WITH PULMONARY EDEMA.

CHRONIC EXPOSURE:
DUST CAN CAUSE INFLAMMATION OF THE LINING TISSUE OF THE INTERIOR OF THE NOSE AND INFLAMMATION OF THE CORNEA. HYPERSENSITIVE INDIVIDUALS MAY DEVELOP AN ALLERGIC DERMATITIS. RESPIRABLE CRYSTALLINE SILICA (QUARTZ) CAN CAUSE SILICOSIS, A FIBROSIS (SCARRING) OF THE LUNGS AND POSSIBLY CANCER. THERE IS EVIDENCE THAT EXPOSURE TO RESPIRABLE SILICA OR THE DISEASE SILICOSIS IS ASSOCIATED WITH AN INCREASED INCIDENCE OF SCLERODERMA, TUBERCULOSIS AND KIDNEY DISORDERS.

CARCINOGENICITY LISTINGS:

NTP: KNOWN CARCINOGEN

OSHA: NOT LISTED AS A CARCINOGEN

IARC MONOGRAPHS: GROUP 1 CARCINOGEN

CALIFORNIA PROPOSITION 65: KNOWN CARCINOGEN

NTP:
THE NATIONAL TOXICOLOGY PROGRAM, IN ITS "NINTH REPORT ON CARCINOGENS" (RELEASED MAY 15, 2000) CONCLUDED THAT "RESPIRABLE CRYSTALLINE SILICA (RCS), PRIMARILY QUARTZ DUSTS OCCURRING IN INDUSTRIAL AND OCCUPATIONAL SETTINGS, IS KNOWN TO BE A HUMAN CARCINOGEN, BASED ON SUFFICIENT EVIDENCE OF CARCINOGENICITY FROM STUDIES IN HUMANS INDICATING A CAUSAL RELATIONSHIP BETWEEN EXPOSURE TO RCS AND INCREASED LUNG CANCER RATES IN WORKERS EXPOSED TO CRYSTALLINE SILICA DUST (REVIEWED IN IAC, 1997; BROWN ET AL., 1997; HIND ET AL., 1997)

IARC:
THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER ("IARC") CONCLUDED THAT THERE WAS "SUFFICIENT EVIDENCE IN HUMANS FOR THE CARCINOGENICITY OF CRYSTALLINE SILICA IN THE FORMS OF QUARTZ OR CRISTOBALITE FROM OCCUPATIONAL SOURCES", AND THAT THERE IS "SUFFICIENT EVIDENCE IN EXPERIMENTAL ANIMALS FOR THE CARCINOGENICITY OF QUARTZ OR CRISTOBALITE." THE OVERALL IARC EVALUATION WAS THAT "CRYSTALLINE SILICA INHALED IN THE FORM OF QUARTZ OR CRISTOBALITE FROM OCCUPATIONAL SOURCES IS CARCINOGENIC TO HUMANS (GROUP 1)." THE IARC EVALUATION NOTED THAT "CARCINOGENICITY WAS NOT DETECTED IN ALL INDUSTRIAL CIRCUMSTANCES OR STUDIES. CARCINOGENICITY MAY BE DEPENDENT ON INHERENT CHARACTERISTICS OF THE CRYSTALLINE SILICA OR ON EXTERNAL FACTORS AFFECTING ITS BIOLOGICAL ACTIVITY OR DISTRIBUTION OF ITS

POLYMORPHS." FOR FURTHER INFORMATION ON THE IARC EVALUATION, SEE IARC MONOGRAPHS ON THE EVALUATION OF CARCINOGENIC RISKS TO HUMANS, VOLUME 68, "SILICA, SOME SILICATES..." (1997)

SIGNS AND SYMPTOMS OF EXPOSURE:
SYMPTOMS OF EXCESSIVE EXPOSURE TO THE DUST INCLUDE SHORTNESS OF BREATH AND REDUCED PULMONARY FUNCTION. EXCESSIVE EXPOSURE TO SKIN AND EYES ESPECIALLY WHEN MIXED WITH WATER CAN CAUSE CAUSTIC BURNS AS SEVERE AS THIRD DEGREE.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:
INDIVIDUALS WITH SENSITIVE SKIN AND WITH PULMONARY AND/OR RESPIRATORY DISEASE, INCLUDING, BUT NOT LIMITED TO, ASTHMA AND BRONCHITIS, OR SUBJECT TO EYE IRRITATION, SHOULD BE PRECLUDED FROM EXPOSURE. EXPOSURE TO CRYSTALLINE SILICA OR THE DISEASE SILICOSIS IS ASSOCIATED WITH INCREASED INCIDENCE OF SCLERODERMA, TUBERCULOSIS AND POSSIBLY INCREASED INCIDENCE OF KIDNEY LESIONS.

EMERGENCY FIRST AID PROCEDURES:

EYES:
IMMEDIATELY FLUSH EYE THOROUGHLY WITH WATER. CONTINUE FLUSHING EYE FOR AT LEAST 15 MINUTES, INCLUDING UNDER LIDS, TO REMOVE ALL PARTICLES. CALL PHYSICIAN IMMEDIATELY.

SKIN:
WASH SKIN WITH COOL WATER AND pH-NEUTRAL SOAP OR A MILD DETERGENT.
SEEK MEDICAL TREATMENT IF IRRITATION OR INFLAMMATION DEVELOPS OR PERSISTS.
SEEK IMMEDIATE MEDICAL TREATMENT IN THE EVENT OF BURNS.

INHALATION:
REMOVE PERSON TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. SEEK MEDICAL HELP IF COUGHING AND OTHER SYMPTOMS DO NOT SUBSIDE. INHALATION OF LARGE AMOUNTS OF PORTLAND CEMENT REQUIRE IMMEDIATE MEDICAL ATTENTION.

INGESTION:
DO NOT INDUCE VOMITING. IF CONSCIOUS, HAVE THE VICTIM DRINK PLENTY OF WATER AND CALL A PHYSICIAN IMMEDIATE

PRECAUTIONS FOR SAFE HANDLING AND USE

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SPILLS:
IF SPILLED, USE DUSTLESS METHODS (VACUUM) AND PLACE INTO COVERED CONTAINER FOR DISPOSAL OR USE IF NOT CONTAMINATED OR WET. USE ADEQUATE VENTILATION.

WASTE DISPOSAL METHOD:
THE PACKAGING AND MATERIAL MAY BE LAND FILLED; HOWEVER, MATERIAL SHOULD BE COVERED TO MINIMIZE GENERATION OF AIRBORNE DUST. THIS PRODUCT IS NOT CLASSIFIED AS A HAZARDOUS WASTE UNDER RCRA OR CERCLA.

CONTROL MEASURES

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INHALATION:
DO NOT BREATH DUST. IN DUSTY ENVIRONMENTS, THE USE OF AN OSHA, MSHA OR NIOSH APPROVED RESPIRATOR IS RECOMMENDED. LOCAL EXHAUST CAN BE USED, IF NECESSARY, TO CONTROL AIRBORNE DUST LEVELS.

EYES: WEAR TIGHT FITTING GOGGLES.

SKIN:
THE USE OF BARRIER CREAMS OR IMPERVIOUS GLOVES, BOOTS AND CLOTHING TO PROTECT THE SKIN FROM CONTACT IS RECOMMENDED. FOLLOWING WORK, WORKERS SHOULD SHOWER WITH SOAP AND WATER. PRECAUTIONS MUST BE OBSERVED BECAUSE BURNS OCCUR WITH LITTLE WARNING - LITTLE HEAT IS SENSED. WARN EMPLOYEES AND/OR CUSTOMERS OF THE HAZARDS AND REQUIRED OSHA PRECAUTIONS ASSOCIATED

WITH THE USE OF THIS PRODUCT.

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NOTE:
THE INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BASED UPON DATA BELIEVED TO BE CORRECT. HOWEVER, NO GUARANTEE OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, IS MADE WITH RESPECT TO THE INFORMATION CONTAINED HEREIN. WE ACCEPT NO RESPONSIBILITY AND DISCLAIM ALL LIABILITY FOR ANY HARMFUL EFFECTS WHICH MAY BE CAUSED BY EXPOSURE TO SILICA CONTAINED IN OUR PRODUCTS. CUSTOMERS-USERS MUST COMPLY WITH ALL APPLICABLE HEALTH AND SAFETY LAWS, REGULATIONS AND ORDERS COVERING SILICA.

DATE PREPARED: JANUARY 2, 2007

BY RICH OTTERSTROM CP INDUSTRIES CHEMIST

PITT PENN OIL CO.

P.O. BOX 296
FREEPORT ROAD
CREIGHTON, PA 15030
412-226-2712

PRODUCT SPECIFICATION SHEET

Product Description: Charcoal Lighter Fluid

Product Name: Sure Glow Charcoal Lighter Fluid

Product Code: 22801

	Method	Specifications	Typical
Gravity, API @ 60 F	D-287	48-53	50.0
Specific Gravity @ 60 F	D-891	0.7669-0.7883	0.7796
Color	D-156	30 min	+30
Flash Point, F T.C.C.	D-56	100 min (37.8 C)	105 (40.6 C)
Kauri-Butanol Value	D-1133	35 min	36
Aniline Point	D-611		139 (59.4 C)
Refractive Index @ 25 C	D-1218		1.4325
Odor		Mild	Mild
Residual Odor		None	None
Acidity of Distillation Residue	D-1093	Neutral	Neutral
Sulfur H2S/Doctor	D-484	Sweet	Sweet
Corrosion	D-130	2 max	1
Composition Volume, %			
Aromatics			14
Distillation, F	D-86		
IBP		310-320 (154.4-160.0 C)	315 (157.2 C)
10%			325 (162.8 C)
50%		335-350 (168.3-176.7 C)	340 (121.1 C)
90%			370 (187.8 C)
Dry Point		400 max (204.4 C)	388 (197.8 C)

SHIPPING DATA:

Pounds per Gallon, 60 F (15.6)	6.49
Flash Point, F, T.C.C.	105 (40.6 C)
DOT Label Required	None
DOT Identification No.	UN 1255

Meets the following standard specifications:

ASTM D-235, Type 1
ASTM D-484, Type 1 Stoddard Solvent

Code: 2516000

C.A.S. No.: 64742-88-7
C.A.S. Registry Name: Solvent Naphtha (Petroleum), Medium Aliphatic
( ) Indicates ASTM Test Method
*Typical analysis not guaranteed.

Pitt Penn Oil Co.
Product Name: Sure Glow Charcoal Lighter Fluid
Product Code: 22801

FIRE AND EXPLOSION DATA

SPECIAL FIRE FIGHTING PROCEDURES: Do not use water, except as fog.

UNUSUAL FIRE & EXPLOSION HAZARDS: Avoid all ignition sources such as flames and sparks.

FLASHPOINT (METHOD USED ASTM D92): 38°C (101°F)
FLAMMABLE LIMITS %: Lower - 1; Upper - 7
EXTINGUISHING AGENTS: Dry chemical or water fog or CO_2 or foam. Exposed material may be cooled with water.

HEALTH HAZARD DATA

PERMISSIBLE CONCENTRATIONS: Stoddard solvent - 500 ppm (OSHA); 100 ppm (ACGIH); STEL 200 ppm (ACGIH)
CHRONIC EFFECTS OF OVEREXPOSURE: Irritation of eyes, nose and throat. Dizziness. Dermatitis.
ACUTE TOXICOLOGICAL PROPERTIES: No data available.
EMERGENCY FIRST AID PROCEDURES:
- EYES: Immediately flush with large quantities of water for at least 15 minutes and call a physician.
- SKIN CONTACT: Remove excess with cloth or paper. Wash thoroughly with soap and water.
- INHALATION: Remove victim to fresh air. Call a physician.
- IF SWALLOWED: **Contact a physician immediately. DO NOT induce vomiting.** (Vomiting may cause aspiration into lungs resulting in chemical pneumonia.)*

*This statement is required under federal regulations for consumer products. Although this product is intended for industrial use, the statement is included because of the possibility of consumer use.

SPECIAL PROTECTION INFORMATION

VENTILATION TYPE REQUIRED (Local, mechanical, special): Local if necessary to maintain allowable PEL (permissible exposure limit) or TLV (threshold limit value).
RESPIRATORY PROTECTION (Specify Type): Use NIOSH/OSHA approved respirator with organic vapor cartridge if vapor concentration exceeds permissible exposure limit.
PROTECTIVE GLOVES: Neoprene type
EYE PROTECTION: Chemical safety goggles
OTHER PROTECTIVE EQUIPMENT: None

Pitt Penn Oil Co.
Product Name: Sure Glow Charcoal Lighter Fluid
Product Code: 22801

HANDLING OF SPILLS OR LEAKS

PROCEDURES FOR CLEAN-UP: Avoid all ignition sources such as flames and sparks. Ensure good ventilation. If volume is significant, transfer into containers for disposal. Seal containers tightly. Absorb on an inert ingredient such as earth, sand, or vermiculite. Sweep up and dispose of according to federal, state and local regulations.
WASTE DISPOSAL: Dispose of in accordance with all applicable federal, state and local regulations.

REACTIVITY DATA

STABILITY: Stable
CONDITIONS TO AVOID: Extreme heat.
INCOMPATIBILITY: Keep away from strong oxidizers, such as hydrogen peroxide and bromine and chromic acid.
HAZARDOUS POLYMERIZATION: Will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide and dioxide from burning, oxides of phosphorous, oxides of sulfur.

SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Avoid all ignition sources as flames and sparks.
MAXIMUM STORAGE TEMPERATURE: 38°C (100°F)

TRANSPORTATION DATA

D.O.T.: Regulated
REPORTABLE QUANTITY: None
FREIGHT CLASSIFICATION: Petroleum naphtha - combustible liquid
SPECIAL TRANSPORTATION NOTES: Unregulated by DOT when shipped in containers of less than 110 gallons.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind, expressed or implied. We assume no responsibility for any loss, damage, or expense, direct or consequential, arising out of their use.

Signature Paul A. Pavlik

May 1, 1994

00011-XXXX

MATERIAL SAFETY DATA SHEET

May be used to comply with OSHA's 29 CFR 1910.1200)

IDENTITY (AS USED ON LABEL AND LIST)	Note: blank spaces are not permitted. If any item is not applicable,
DICK BLICK PREMIUM TEMPERA	or no information available, the space must be marked appropriately

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

(608) 868-6873
EMERGENCY TELEPHONE NUMBER

MAY 2011
DATE PREPARED

SECTION 2 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS: CHEMICAL NAME & COMMON NAMES	%	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED
Contains no hazardous substand per OSHA 29 CFR 1910.1200				

Material is a water based product with the AP Seal. Products with, the AP Approved Products Seal of the Art and Craft Materials Institute Inc. are certified in a program of toxicological evaluation by a medium expert to contain no material in sufficient quantities to be toxic or injurious to humans or to cause acute or chronic health problems. These products are certified by the Institute to be in accordance with the voluntary chronic hazard labeling standard ASTM D-4236. In addition, there is no physical hazard as defined within 29 CFR Part 1910.1200 (c).

SECTION 3 - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT -	Range 215-225 F	SPECIFIC GRAVITY (H2O = 1) -	Range 1.03-1.68
VAPOR PRESSURE (mm Hg & TEMPERATURE) -	N/A	MELTING POINT -	N/A
VAPOR DENSITY (AIR=1) -	lighter than air	EVAPORATION RATE (WATER = 1) -	lower than ether
SOLUBILITY IN WATER -	completely soluble in water	WATER REACTIVE -	N/A
APPEARANCE & ODOR -	various colors and odorless		

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT & METHOD USED	FLAMMABILITY LIMITS IN AIR % BY VOLUME	
N/A	N/A	
EXTINGUISHER MEDIA	LEL	UEL
CO2, Foam or Water	N/A	N/A

SPECIAL FIRE FIGHTING PROCEDURES
None known

UNUSUAL FIRE AND EXPLOSION HAZARDS
None

Item Numbers: 00011-0039, 00011-0049, 00011-0059, 00011-0069, 00011-0079, 00011-0089, 00011-0099, 00011-1005, 00011-1006, 00011-1007, 00011-1008, 00011-1009, 00011-2005, 00011-2006, 00011-2007, 00011-2008, 00011-2009, 00011-3005, 00011-3006, 00011-3007, 00011-3008, 00011-3009, 00011-3045, 00011-3046, 00011-3047, 00011-3048, 00011-3049, 00011-3216, 00011-3716, 00011-4005, 00011-4006, 00011-4007, 00011-4008, 00011-4009, 00011-4105, 00011-4106, 00011-4107, 00011-4108, 00011-4109, 00011-4216, 00011-4505, 00011-4506, 00011-4507, 00011-4508, 00011-4509, 00011-4916, 00011-5005, 00011-5006, 00011-5007, 00011-5008, 00011-5009, 00011-5115, 00011-5116, 00011-5117, 00011-5118, 00011-5119, 00011-5246, 00011-6505, 00011-6506, 00011-6507, 00011-6508, 00011-6509, 00011-7005, 00011-7006, 00011-7007, 00011-7008, 00011-7009, 00011-7055, 00011-7056, 00011-7057, 00011-7058, 00011-7059, 00011-7266, 00011-7345, 00011-7346, 00011-7347, 00011-7348, 00011-7349, 00011-8005, 00011-8006, 00011-8007, 00011-8008, 00011-8009, 00011-8045, 00011-8046, 00011-8047, 00011-8048, 00011-8049, 00011-9005, 00011-9006, 00011-9007, 00011-9008, 00011-9009, 00011-9305, 00011-9306, 00011-9307, 00011-9308, 00011-9309

SECTION 5 - REACTIVITY HAZARD DATA

PREMIUM TEMPERA Page 2 of 2

STABILITY	CONDITIONS TO AVOID
[X] STABLE [ ] UNSTABLE	None

INCOMPATABILITY (MATERIALS TO AVOID)	N/A
HAZARDOUS DECOMPOSITION PRODUCTS	N/A

HAZARDOUS POLYMERIZATION	CONDITIONS TO AVOID
[ ] MAY OCCUR N/A [ ] WILL NOT OCCUR	None known

SECTION 6 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY N/A	CARCINOGEN LISTED IN N/A
[ ] INHALATION [ ] INGESTION [ ] SKIN ABSORTION [ ] NOT HAZARDOUS	[ ] NTP [ ] OSHA [ ] IARC MONOGRAPH [X] NOT LISTED

HEALTH HAZARDS	ACUTE
Refer to Section 2	CHRONIC

SIGNS AND SYMPTOMS	Not known
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE	Not known
EMERGENY FIRST AID PROCEDURES -	Consult a Physician Immediatley.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE/LEAK PROCEDURES

STEPS TO BE TAKEN IS MATERIAL IS SPILLED OR RELEASED

Usual Clean Up Procedure

WASTE DISPOSAL METHODS

Dispose of in accordance with Federal and Local State Regulations

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Store at room temperature.

OTHER PRECAUTIONS AND/OR SPECIAL HAZARDS

Not known

SECTION 8 - CONTROL AND PROTECTIVE MEASURES

RESPIRATORY PROTECTION (SPECIFY TYPE)

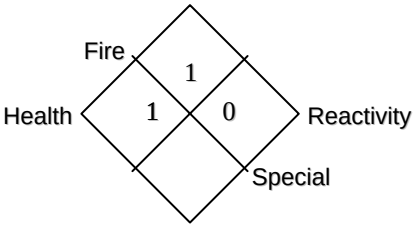
None required

VENTILATION TO BE USED	LOCAL EXHAUSE	MECHANICAL (GENERAL)	SPECIAL
None required	OTHER (SPECIFY)		

PROTECTIVE GLOVES	N/A	EYE PROTECTION	N/A

OTHER PROTECTIVE CLOTHING AND EQUIPMENT	N/A
HYGIENIC WORK PRACTICES	N/A

Item Numbers: 00011-0039, 00011-0049, 00011-0059, 00011-0069, 00011-0079, 00011-0089, 00011-0099, 00011-1005, 00011-1006, 00011-1007, 00011-1008, 00011-1009, 00011-2005, 00011-2006, 00011-2007, 00011-2008, 00011-2009, 00011-3005, 00011-3006, 00011-3007, 00011-3008, 00011-3009, 00011-3045, 00011-3046, 00011-3047, 00011-3048, 00011-3049, 00011-3216, 00011-3716, 00011-4005, 00011-4006, 00011-4007, 00011-4008, 00011-4009, 00011-4105, 00011-4106, 00011-4107, 00011-4108, 00011-4109, 00011-4216, 00011-4505, 00011-4506, 00011-4507, 00011-4508, 00011-4509, 00011-4916, 00011-5005, 00011-5006, 00011-5007, 00011-5008, 00011-5009, 00011-5115, 00011-5116, 00011-5117, 00011-5118, 00011-5119, 00011-5246, 00011-6505, 00011-6506, 00011-6507, 00011-6508, 00011-6509, 00011-7005, 00011-7006, 00011-7007, 00011-7008, 00011-7009, 00011-7055, 00011-7056, 00011-7057, 00011-7058, 00011-7059, 00011-7266, 00011-7345, 00011-7346, 00011-7347, 00011-7348, 00011-7349, 00011-8005, 00011-8006, 00011-8007, 00011-8008, 00011-8009, 00011-8045, 00011-8046, 00011-8047, 00011-8048, 00011-8049, 00011-9005, 00011-9006, 00011-9007, 00011-9008, 00011-9009, 00011-9305, 00011-9306, 00011-9307, 00011-9308, 00011-9309



Hazard Code

0. Insignificant
1. Slight
2. Moderate
3. High
4. Extreme

Material Safety Data Sheet

This form complies with OSHA's Hazard Communication Standard 29 CFR 1910.1200.

U.S. Department of Labor

Occupation Safety and Health Administration

IDENTITY	
EXMARK PREMIUM HYDRO OIL	Product Code: 1260

Section I

Manufacturer's Name Exmark Manufacturing Co., Inc.	Chemtrec 24 Hour Emergency Telephone Number (800) 424-9300
Address (Number, Street, City, State, and ZIP Code) 2101 Ashland Avenue Beatrice, NE 68310	Telephone Number For Information (402) 223-6300 Date Prepared June 17, 2011
MSD 43	Signature of Preparer (optional)

Section II - Ingredients/Identity Information

Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (approx.)
Mineral Oil	5 mg/M3	5 mg/M3		85
Proprietary additives				15

SARA Section 313 Toxic Chemical Release Reporting: Products used for maintaining motor vehicles are specifically exempted from Title 313 reporting. § 372.38
OSHA & ACGIH have set the exposure limit for mineral oil at 5 mg/M3 for oil mist in air.

Section III - Physical/Chemical Characteristics

Boiling Point (minimum)	500°F	Specific Gravity (H2O = 1)	0.9
Vapor Pressure (mm Hg)	0.01	Melting Point	NA
Vapor Density (AIR = 1)	5	Evaporation Rate (Butyl Acetate = 1)	<0.01

Solubility in Water
Very slight at room temperature

Appearance & Odor
Brown oily liquid with a characteristic odor

Section IV - Fire and Explosion Hazard Data

Flash Point (C.O.C.) °F	Flammable Limits	LEL	UEL
425 min		1	7

Extinguishing Media
Carbon dioxide,water,spray,foam, dry chemical

Special Fire Fighting Procedures
Use self contained breathing apparatus for fighting fires in enclosed areas.

Unusual Fire and Explosion Hazards
Directly spraying extinguishing media onto hot burning products may cause frothing and spreading of fire.

Section V - Reactivity Data

Stability	Unstable		Conditions to Avoid	NA
	Stable	X		

Incompatibility (Materials to Avoid)

Avoid contact with strong oxidants such as chlorine gas

Hazardous Decomposition or Byproducts

Fumes,smoke,COx,SOx,NOx,when combusted

Hazardous Polymerization	May Occur		Conditions to Avoid	NA
	Will Not Occur	X		

Section VI - Health Hazard Data

Route(s) of Entry:	Inhalation?	Skin?	Ingestion?
	X	X	X

Health Hazards (Acute and Chronic)

Product has a low order of acute, oral, and dermal toxicity. Product contacting the eyes may cause irritation. Repeated skin contact may cause skin irritation.

Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
	NO	NO	NO

Signs and Symptoms of Exposure

Reddening and irritation of eyes or skin

Medical Conditions Generally Aggravated by Exposure

Pre-existing dermatitis or skin diseases

Emergency and First Aid Procedure

Skin contact: Wash with a mild soap containing lanoline or other emolients.
Eye contact: Flush eyes with clear water for 15 minutes and contact a physician if irritation persists.

Section VII - Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled

Recover free product. Add sand,earth,or other absorbent to spill.
Mimimize skin contact. Keep product out of sewers and waterways.
Advise authorities if product has entered or may enter sewers,watercourses or extensive land areas.

Waste Disposal Method

Dispose of material in a licensed landfill or incineration facility in accordance with local,state, and federal regulations.

Precautions to be Taken in Handling and Storage

Store away from heat, sparks and other ignititon sources. “Empty” containers retain residual oil. Do not pressurize, cut, weld, solder, drill, grind or expose drums to other ignition sources.

Other Precautions

Section VIII - Control Measures

Respiratory Protection (Specify Type)

Organic vapor mask should be used if mechanical ventilation is insufficient.

Ventilation	Local Exhaust	X	Special	NA
	Mechanical(General)	To meet TLV	Other	NA

Protective Gloves

Use oil resistant gloves to avoid prolonged or repeated skin contact.

Other Protective Clothing or Equipment

Use splash goggles or face shield when eye contact may occur.
Use chemical resistant apron to avoid contaminating regular clothing if needed.

Work/Hygienic Practices

Workers should wash exposed skin several times with soap and water. Soiled work clothing should be laundered or dry-cleaned.

Material Safety Data Sheet (DS1)

IDENTITY *(As Used on Label and List)*	Distributor
FREY HOLDING SOLUTION CONCENTRATE	SCHOOL SPECIALTY

Section I

Manufacturer's Name RANACO CORPORATION	**Emergency Telephone Number** 24HR Assistance CHEMTREC: 1-800-424-9300
Address *(Number, Street, City, State, and ZIP Code)* 4345 E. Irvington Road Tucson, AZ 85714	**Telephone Number for Information** 1-800-528-7023 (Arizona Time 8am-5pm)
	Date Prepared June 4, 2013
	Signature of Preparer (Optional)

Section II – Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	CAS #	OSHA PEL	ACGIH TLV	Other Limits Recommended	% Optional
Propylene Glycol	57-55-6	Not Established	Not Established	WEEL 10mg/m^3	90
Ethylene Glycol Phenyl Ether	122-99-6	Not Established	Not Established	None Recommended	9
Diethylene Glycol Phenyl Ether	104-68-7	Not Established	Not Established	None Recommended	1

Section III – Physical/Chemical Characteristics

Boiling Point	N/A	**Specific Gravity (H_2O = 1)**	Unknown
Vapor Pressure (mm Hg.)	Unknown	**Melting Point**	N/A
Vapor Density (AIR = 1)	>1	**Evaporation Rate Butyl Acetate = 1**	Unknown

Solubility in Water
Complete

Appearance and Odor
Pleasant smelling liquid

Section IV – Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
Glycol Ether Phenyl Ether = 172 Propylene Glycol = 218		Propylene Glycol 2.6	Propylene Glycol 12.5

Extinguishing Media
Use dry chemical, CO_2 or alcohol foam

Special Fire Fighting Procedures
Wear fire fighting protective equipment and a self-contained breathing apparatus. Use best methods for surrounding fire conditions.

Unusual Fire and Explosive Hazards
None specified.

Section V – Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	Strong oxidizing agents, excessive heat

Incompatibility *(Materials to Avoid)*
Avoid strong oxidizing agents, acids, and alkalis.

Hazardous Decomposition or Byproducts
May liberate carbon monoxide or carbon dioxide, and propionaldehyde along with organic compounds in black smoke.

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	Heat sparks, and open flames.

Section VI – Health Hazard Data

Route(s) of Entry:	Inhalation?	Skin?	Ingestion?
	Yes	Yes	Yes

Health Hazards *(Acute and Chronic)*
SKIN: Prolonged contact is essentially non-irritating to the skin. Highly excessive exposure may cause a softening of the skin, and/or absorption of harmful amounts of Glycol Ether EPH which may cause Hemolysis, thereby impairing the bloods ability to transport oxygen. It is very doubtful that this will occur with the amounts of Ethylene Glycol Phenyl Ether contained in this mixture. **EYES:** Liquid and mist may irritate the eyes. Slight risk of corneal injury due to the Glycol Ether EPH content. **INHALATION:** No adverse effects expected or known. **INGESTION:** Swallowing large quantities may cause diarrhea, nausea and vomiting. **CHRONIC:** May cause slight anesthesia and tissue injury. Excessive repeated ingestions may cause central nervous system effects. Animal studies suggest the liver and kidneys may be target organs for overexposure

Carinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
	No	No	No

Signs and Symptoms of Exposure
SKIN: Moderate irritation; **EYES:** Severe irritation; **INGESTION:** Toxic; **INHALATION:** Low or mild irritation

Medical Conditions Generally Aggravated by Exposure
None known

Emergency and First Aid Procedures
SKIN: Wash with soap and water. **EYES:** Flush with water for 15 minutes lifting the upper and lower eyelids occasionally. **INHALATION:** Move victim promptly to fresh air. Give oxygen if breathing is difficult. **INGESTION:** If conscious, drink no more than 2 glasses of water and induce vomiting. Keep head below hips while vomiting. Seek medical attention if any of the above symptoms persist.

Section VII – Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled
Wear protective equipment. Eliminate sources of ignition. Ventilate area. Remove spill with pump or with non-flammable absorbent. Place in suitable container for disposal. Prevent liquid from entering sewers, waterways or low areas. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Generally not a concern with this product.

Waste Disposal Method
Dispose of contaminated product and materials used in cleaning up spills or leaks in a suitable container. Consult appropriated federal, state and local regulatory agencies to ascertain proper disposal procedures.

Precautions to Be Taken in Handling and Storage
Store in tightly closed containers in flammable liquid storage room/cabinet. Avoid excessive heat. Keep away from incompatible materials.

Other Precautions
Do not pressurize, cut, weld, braze, solder, drill, grind, or expose containers to heat, flame, sparks, static electricity, or other sources of ignition. Do not store or handle in aluminum equipment at temperatures above 120 °F.

Section VIII – Control Measures

Respiratory Protection *(Specify Type)*
If levels may or does exceed the recommended health standards, wear a respirator. For emergency use, wear breathing apparatus.

Ventilation	Local Exhaust	Special
	General room ventilation	
	Mechanical	***Other***

Protective Gloves	Gloves are recommended.	Eye Protection	Eye protection is recommended. It is generally recognized that contact lenses may contribute to the severity of an eye injury.

Other Protective Clothing or Equipment
Long sleeved shirt, trousers, and safety shoes.

Work/Hygienic Practices
Eye wash station and safety showers should be available in the immediate vicinity of any potential exposure.

FOR ADDITIONAL INFORMATION
Contact Ranaco's Safety Manager during business hours at (520) 790-7737

NOTICE: RANACO expressively disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein.

All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, **RANACO** makes no representations as to its accuracy or sufficiency. Conditions of use are beyond **RANACO**'s control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling and disposal of the product, or from the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.

Material Safety Data Sheet (DS1)

IDENTITY *(As Used on Label and List)*	Distributor
BIO-PERM CONCENTRATE	SARGENT-WELCH

Section I

Manufacturer's Name RANACO CORPORATION	**Emergency Telephone Number** 24HR Assistance CHEMTREC: 1-800-424-9300
Address *(Number, Street, City, State, and ZIP Code)* 4345 E. Irvington Road Tucson, AZ 85714	**Telephone Number for Information** 1-800-528-7023 (Arizona Time 8am-5pm)
	Date Prepared April 22, 2010
	Signature of Preparer (Optional)

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Hazardous Components (Specific Chemical Identity; Common Name(s))	CAS #	OSHA PEL	ACGIH TLV	Other Limits Recommended	% Optional
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Boiling Point	N/A	**Specific Gravity (H_2O = 1)**	Unknown
Vapor Pressure (mm Hg.)	Unknown	**Melting Point**	N/A
Vapor Density (AIR = 1)	>1	**Evaporation Rate** **Butyl Acetate = 1**	Unknown

Solubility in Water
Complete

Appearance and Odor
Pleasant smelling liquid

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Flash Point (Method Used)	Flammable Limits	LEL	UEL
Glycol Ether Phenyl Ether = 172 Propylene Glycol = 218		Propylene Glycol 2.6	Propylene Glycol 12.5

Extinguishing Media
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Special Fire Fighting Procedures
Wear fire fighting protective equipment and a self-contained breathing apparatus. Use best methods for surrounding fire conditions.

Unusual Fire and Explosive Hazards
None specified.

Section V – Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	Strong oxidizing agents, excessive heat

Incompatibility *(Materials to Avoid)*
Avoid strong oxidizing agents, acids, and alkalis.

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May liberate carbon monoxide or carbon dioxide, and propionaldehyde along with organic compounds in black smoke.

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	Will Not Occur	X	Heat sparks, and open flames.

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Health Hazards *(Acute and Chronic)*
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Carinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
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Waste Disposal Method
Dispose of contaminated product and materials used in cleaning up spills or leaks in a suitable container. Consult appropriated federal, state and local regulatory agencies to ascertain proper disposal procedures.

Precautions to Be Taken in Handling and Storage
Store in tightly closed containers in flammable liquid storage room/cabinet. Avoid excessive heat. Keep away from incompatible materials.

Other Precautions
Do not pressurize, cut, weld, braze, solder, drill, grind, or expose containers to heat, flame, sparks, static electricity, or other sources of ignition. Do not store or handle in aluminum equipment at temperatures above 120 °F.

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Respiratory Protection *(Specify Type)*
If levels may or does exceed the recommended health standards, wear a respirator. For emergency use, wear breathing apparatus.

Ventilation	Local Exhaust	Special
	General room ventilation	
	Mechanical	***Other***

Protective Gloves	Gloves are recommended.	Eye Protection	Eye protection is recommended. It is generally recognized that contact lenses may contribute to the severity of an eye injury.

Other Protective Clothing or Equipment
Long sleeved shirt, trousers, and safety shoes.

Work/Hygienic Practices
Eye wash station and safety showers should be available in the immediate vicinity of any potential exposure.

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NASCO MSDS
#9306

SUMMARIZED MSDS AND ENVIRONMENTAL INFORMATION FOR NASCO-GUARD® SPECIMENS UPDATED JULY 2008

Manufacturer's Name: NASCO, Fort Atkinson, Wisconsin 53538-0901
Emergency Phone Number: 920-568-5565

The following safety data applies to NASCO-Guard® preservative fluid (or tissue fluids) containing approximately 74% water, 25% propylene glycol (1, 2-propanediol), 0.3% or less formaldehyde, and a possible trace of phenol. The Chemical Abstracts Service (CAS) registration number for propylene glycol is 57-55-6. The CAS number for formaldehyde is 50-00-0.The CAS number for phenol is 108-95-2. As required by law, we will provide complete information on each of the fixative and preservative chemicals that may be present in our specimens.

GENERAL INFORMATION: NASCO-Guard® specimens are initially fixed in formaldehyde solutions ranging from 0.8%-3.7%. The embalming fluid of large animals (e.g., cats, dogs, fetal pigs) may also contain 1.9% phenol. All specimens are subsequently perfused with a propylene glycol-water solution until tissue fluids and ambient fluids contain 20% to 25% glycol. Residual free formaldehyde is thus reduced to 0.3% or less. Phenol, if present, is reduced commensurately. Propylene glycol is nontoxic.

APPEARANCE AND ODOR: Colorless, sweet tasting liquid with mild odor (slight disinfectant odor if phenol is present).

FIRE AND EXPLOSION HAZARD: None.

HEALTH HAZARD: NASCO-GUARD® PRESERVATIVE FLUID (OR TISSUE FLUIDS)

EYES: Direct contact with eyes may cause irritation. Wash eyes with water. Safety glasses may be worn as a precautionary measure.
SKIN: Mild irritation possible in hypersensitive individuals. Wash hands with soap and water after handling specimens. Rubber or plastic gloves may be worn as a precautionary measure.
INHALATION: Very small quantities of formaldehyde gas can cause distress (dizziness, nausea, headache, etc.) in hypersensitive individuals. Specimens should be used in a well-ventilated room.
ORAL: Because NASCO-Guard® specimens are moist packed little fluid is available for consumption. Residual phenol could be toxic, but ingestion is unlikely due to medicinal odor.

EMERGENCY AND FIRST AID PROCEDURES:

SWALLOWING: Drink large amounts of water. Do not induce vomiting. Get medical attention immediately.
SKIN: Wash with soap and water.
INHALATION: Remove to fresh air. Call a physician if discomfort persists.
EYES: Flush with water.

SUPPLEMENTAL INFORMATION ON CHEMICALS THAT MAY BE PRESENT IN NASCO-GUARD® SPECIMENS.

PROPYLENE GLYCOL is nontoxic, as evidenced by its wide use in foods, pharmaceuticals, and cosmetics. Ingestion may cause nausea. It may cause minor skin irritation.
FORMALDEHYDE is well known for its toxic and irritant properties. A large quantity of NASCO-Guard® would have to be ingested to inflict a lethal dose because its residual formaldehyde concentration is 0.3% or less.
PHENOL can be toxic. Because phenol has a distinct medicinal smell, however, it is unlikely that specimens containing phenol would be eaten. Phenol's wide use as a disinfectant and deodorant attests to its relative safety when used in highly diluted solutions.

Detailed MSDS information for propylene glycol is included in this summary. Detailed MSDS information for formaldehyde and phenol may be ordered from NASCO's Safety Officer, Dept. MSDS, 901 Janesville Avenue, Fort Atkinson, WI 53538-0901. Be reminded however that the tabulated chemical and physical properties are for "full strength" concentrations. Formaldehyde and phenol are present in our specimens in only trace amounts. Propylene glycol and water are the main ingredients: both are nontoxic.

DISPOSAL OF SPECIMENS:

NASCO-Guard® specimens are biodegradable. They are suited for burial in an approved sanitary landfill or for incineration. Ambient fluids may be safely disposed via city sewers.

PRESERVED SPECIMEN POLICY STATEMENT

NASCO is a manufacturer and distributor of physical science, chemistry, earth science, and life science teaching materials including preserved zoological specimens. In the course of doing business, skilled NASCO employees preserve, process, and package specimens under the trade name of NASCO-Guard® Preserved Specimens according to guidelines of the U.S. Department of Agriculture. We do not process or sell any specimens that might appear on a threatened or endangered species list.

Since 1941, NASCO has been dedicated to Educational Supply. Specimens sold in the Nasco catalog are collected and processed throughout the world. In our facility we are licensed and/or governed by the U.S. Fish and Wildlife Service, the United States (and Wisconsin) Departments of Agriculture, and the Wisconsin Department of Natural Resources. We follow all guidelines for euthanasia as listed in the Report of the American Veterinary Medical Association Panel on Euthanasia. Worldwide collections are also monitored by the Convention on International Trade in Endangered Species (CITIES). Examples of this would be fish which are collected for their food value and night crawlers which are primarily collected to use as fishing bait. Many other specimens that we supply come to us from Midwest slaughterhouses. If NASCO did not purchase materials for preservation, these inedible animal parts would normally be processed for pet food.

All the cat carcasses processed by NASCO come to us from licensed humane societies, animal shelters and animal control facilities after they have been humanely euthanized in accordance with USDA regulations. It is our policy and belief that none of the cats have been euthanized solely to serve the needs of the biological supply industry. It is our policy to process and recycle only euthanized cat carcasses.

Thank you for purchasing NASCO-Guard® specimens. If you need further information about our NASCO-Guard® Preserved Specimens, please contact us.

1. MATERIAL AND COMPANY IDENTIFICATION

Material Name	:	**Monopropylene glycol - Industrial**
Uses	:	Generally accepted for use as a component in the manufacture of unsaturated polyester resins, functional fluids, paints and coatings and plasticizers.
Product Code	:	U1511
Company	:	**Shell Chemical LP** PO Box 2463 HOUSTON TX 77252-2463 USA
MSDS Request	:	1-800-240-6737
Customer Service	:	1-866-897-4355

Emergency Telephone Number

Chemtrec Domestic (24 hr)	:	1-800-424-9300
Chemtrec International (24 hr)	:	1-703-527-3887

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration
Monopropylene glycol	57-55-6	100.00%W

3. HAZARDS IDENTIFICATION

Emergency Overview

Appearance and Odour	:	Colourless. Liquid. Odourless.
Safety Hazards	:	Not classified as flammable but will burn.

Health Hazards	:	No specific hazards under normal use conditions.

4. FIRST AID MEASURES

General Information	:	In general no treatment is necessary, however, obtain medical advice.
Inhalation	:	Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.
Skin Contact	:	Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available.
Eye Contact	:	Flush eyes with water while holding eyelids open. Rest eyes for 30 minutes. If redness, burning, blurred vision, or swelling persist, transport to the nearest medical facility for additional treatment.
Ingestion	:	In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.

Advice to Physician	:	Treat symptomatically. Following cases of gross over-exposure, investigation of liver, kidney and eye function may be advisable. Records of such incidents should be maintained for future reference.

5. FIRE FIGHTING MEASURES

Flash point	:	99 °C / 210 °F
Explosion / Flammability limits in air	:	2.6 - 12.6 %(V)
Auto ignition temperature	:	421 °C / 790 °F
Specific Hazards	:	Clear fire area of all non-emergency personnel. The vapour is heavier than air, spreads along the ground and distant ignition is possible. Will only burn if enveloped in a pre-existing fire. Hazardous combustion products may include: Carbon monoxide.
Extinguishing Media	:	Large fires should only be fought by properly trained fire fighters. Alcohol-resistant foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable Extinguishing Media	:	Do not use water in a jet.
Protective Equipment for Firefighters	:	Wear full protective clothing and self-contained breathing apparatus.
Additional Advice	:	All storage areas should be provided with adequate fire fighting facilities. Keep adjacent containers cool by spraying with water.

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled or released material. Immediately remove all contaminated clothing. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. For guidance on disposal of spilled material see Chapter 13 of this Material Safety Data Sheet. Observe all relevant local and international regulations.

Protective measures	:	Avoid inhaling vapour and/or mists. Avoid contact with the skin. Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers. Ventilate contaminated area thoroughly.
Clean Up Methods	:	For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely. For small liquid spills (< 1 drum), transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.

Additional Advice : Proper disposal should be evaluated based on regulatory status of this material (refer to Section 13), potential contamination from subsequent use and spillage, and regulations governing disposal in the local area. Observe all relevant local regulations.

7. HANDLING AND STORAGE

General Precautions : Avoid breathing of or contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

Handling : In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. Use local exhaust extraction over processing area. For lines and fittings, avoid copper, copper alloys, zinc. Avoid contact with skin, eyes, and clothing. Air-dry contaminated clothing in a well-ventilated area before laundering. Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Do not empty into drains. Handling Temperature: Ambient. When handling product in drums, safety footwear should be worn and proper handling equipment should be used.

Storage : Prevent all contact with water and with moist atmosphere. Tanks must be clean, dry and rust-free. Must be stored in a diked (bunded) well- ventilated area, away from sunlight, ignition sources and other sources of heat. Nitrogen blanket recommended for large tanks (capacity 100 m3 or higher). Drums should be stacked to a maximum of 3 high. Keep container tightly closed. Keep dry. Must be stored in a well-ventilated area, away from sunlight, ignition sources and other sources of heat. Prevent ingress of water. Storage Temperature : 40°C maximum.

Product Transfer : Lines should be purged with nitrogen before and after product transfer. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. Keep containers closed when not in use.

Additional Information : Ensure that all local regulations regarding handling and storage facilities are followed. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

None established.

Additional Information	:	Wash hands before eating, drinking, smoking and using the toilet.
Exposure Controls	:	No exposure controls are ordinarily required under normal conditions of use. It is good general industrial hygiene practice to minimize exposure to the material.
Personal Protective Equipment	:	Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.
Respiratory Protection	:	No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material.
Hand Protection	:	Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection: Incidental contact/Splash protection: PVC. Neoprene rubber. Nitrile rubber. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Thin disposable gloves should be avoided for long term use. When worn, use once and dispose.
Eye Protection	:	Chemical splash goggles (chemical monogoggles).
Protective Clothing	:	Skin protection not ordinarily required beyond standard issue work clothes.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Colourless. Liquid.
Odour	:	Odourless.
Boiling point	:	186 - 189 °C / 367 - 372 °F
Melting / freezing point	:	-59 °C / -74 °F
Flash point	:	99 °C / 210 °F
Explosion / Flammability limits in air	:	2.6 - 12.6 %(V)
Auto-ignition temperature	:	421 °C / 790 °F
Vapour pressure	:	ca. 10 Pa at 20 °C / 68 °F
Specific gravity	:	1.04 at 3.89 °C / 39.00 °F
Density	:	1,036 kg/m3 at 20 °C / 68 °F
Water solubility	:	Completely miscible.
Solubility in other solvents	:	Readily soluble in various organic solvents.
n-octanol/water partition coefficient (log Pow)	:	ca. -1
Dynamic viscosity	:	55 mPa.s at 20 °C / 68 °F
Vapour density (air=1)	:	2.5 at 20 °C / 68 °F
Hygroscopicity	:	Hygroscopic.

10. STABILITY AND REACTIVITY

Stability	:	Stable. Hygroscopic.
Conditions to Avoid	:	Heat, flames, and sparks. Temperatures above 40°C
Materials to Avoid	:	Strong oxidising agents. Strong acids.
Hazardous Decomposition Products	:	Carbonyl and dioxolane derivatives may be formed.

11. TOXICOLOGICAL INFORMATION

Basis for Assessment	:	Information given is based on product testing, and/or similar products, and/or components.
Acute Oral Toxicity	:	Low toxicity: LD50 >2000 mg/kg
Acute Dermal Toxicity	:	Low toxicity: LD50 >2000 mg/kg , Rabbit
Acute Inhalation Toxicity	:	Expected to be of low toxicity: LC50 greater than near-saturated vapour concentration.
Skin Irritation :		Not irritating to skin.
Eye Irritation	:	Essentially non-irritating to eyes.
Sensitisation	:	Not a skin sensitiser.
Repeated Dose Toxicity	:	Low systemic toxicity on repeated exposure. Cats given high doses of MPG in diet showed a decrease in red blood cell survival.
Mutagenicity	:	Not mutagenic.
Carcinogenicity	:	Not carcinogenic in animal studies.
Reproductive and Developmental Toxicity	:	Not a developmental toxicant. Does not impair fertility.

12. ECOLOGICAL INFORMATION

Acute Toxicity		
Fish	:	Low toxicity: LC/EC/IC50 > 100 mg/l
Aquatic Invertebrates	:	Low toxicity: LC/EC/IC50 > 100 mg/l
Algae	:	Low toxicity: LC/EC/IC50 > 100 mg/l
Microorganisms	:	Expected to have low toxicity: LC/EC/IC50 > 100 mg/l
Mobility	:	If product enters soil, it will be highly mobile and may contaminate groundwater. Dissolves in water.
Persistence/degradability	:	Readily biodegradable.
Bioaccumulation	:	Does not bioaccumulate significantly.

13. DISPOSAL CONSIDERATIONS

Material Disposal	:	Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations.
Container Disposal	:	Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Send to drum recoverer or metal

reclaimer.

Local Legislation : Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with.

14. TRANSPORT INFORMATION

US Department of Transportation Classification (49CFR)
This material is not subject to DOT regulations under 49 CFR Parts 171-180.

IMDG
This material is not classified as dangerous under IMDG regulations.

IATA (Country variations may apply)
This material is not classified as dangerous under IATA regulations.

15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Federal Regulatory Status

Notification Status

AICS	Listed.	
DSL	Listed.	
INV (CN)	Listed.	
ENCS (JP)	Listed.	(2)-234
ISHL (JP)	Listed.	2-(8)-321
ISHL (JP)	Listed.	2-(8)-323
TSCA	Listed.	
EINECS	Listed.	200-338-0
KECI (KR)	Listed.	KE-29267
PICCS (PH)	Listed.	

SARA Hazard Categories (311/312)

No SARA 311/312 Hazards.

State Regulatory Status

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

This material does not contain any chemicals known to the State of California to cause cancer, birth

defects or other reproductive harm.

Pennsylvannia Right-To-Know Chemical List

Monopropylene glycol	(57-55-6)	100.00%	Listed.

16. OTHER INFORMATION

Additional Information	:	For further information, contact your local Shell company or agent.
HMIS Rating (Health, Fire, Reactivity)	:	2, 1, 0
NFPA Rating (Health, Fire, Reactivity)	:	0, 1, 0
MSDS Version Number	:	6.1
MSDS Effective Date	:	03/07/2006
MSDS Revisions	:	A vertical bar (|) in the left margin indicates an amendment from the previous version.
MSDS Regulation	:	The content and format of this MSDS is in accordance with the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
Uses and Restrictions	:	Advice in this document relates only to product as originally supplied. Other derivative chemicals will have different properties and hazards. Advice should be sought on their safe handling and use. Do not use in theatrical fogs or other artificial smoke generator applications. Use for the manufacture of polyurethane products. This product is not intended for use in pharmaceutical, food (including animal feed) or cosmetic type applications.
MSDS Distribution	:	The information in this document should be made available to all who may handle the product
Disclaimer	:	The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty or guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product.

BRENNTAG
PROPYLENE GLYCOL INDUSTRIAL

Material Safety Data Sheet

HUNTSMAN
Enriching lives through innovation

1. Product and company identification

Product name **PROPYLENE GLYCOL - INDUSTRIAL** MSDS # 00033939

Product use Solvent.

Huntsman Petrochemical Corporation
P.O. Box 4980
The Woodlands, TX 77387-4980

TELEPHONE NUMBERS
Transportation Emergency
Company: (800) 328-8501
CHEMTREC: (800) 424-9300
Medical Emergency: (409) 722-9673 (24 Hour)
General MSDS Assistance: (281) 719-6000
Technical Information: (281) 719-7780
E-MAIL: MSDS@huntsman.com

Validation date : 3/11/2009.

In case of emergency

Spills Leaks Fire or Exposure Call Chemtrec: (800) 424-9300
Medical Emergency Information: (800) 328-8501
In Mexico: 01 800 00 214 00
In Columbia: 01 800 91 6012

2. Hazards identification

Physical state : Liquid. [Liquid.]

Odor : Characteristic.

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

Emergency overview : ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE.

THIS PRODUCT IS NOT TO BE USED TO PRODUCE FOGS OR MISTS IN THEATRICAL, MUSICAL, OR OTHER ENTERTAINMENT PERFORMANCES.

Aspiration hazard if swallowed. Can enter lungs and cause damage.

GENERAL INFORMATION : Read the entire MSDS for a more thorough evaluation of the hazards.

3. Composition/information on ingredients

Name	CAS number	%
Propylene glycol	57-55-6	60 - 100

4 . First aid measures

Eye contact Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Skin contact Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Inhalation Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if symptoms occur.

Ingestion Wash out mouth with water. Move exposed person to fresh air. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. Get medical attention. Never give anything by mouth to an unconscious person.

Notes to physician : Symptomatic and supportive therapy as needed. Following severe exposure medical follow-up should be monitored for at least 48 hours.

5 . Fire-fighting measures

Flash point : Closed cup: 99°C (210.2°F)

Flammable limits : Lower: 2.6%
Upper: 12.6%

Products of combustion : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : In a fire or if heated, a pressure increase will occur and the container may burst.
Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment (see section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

PROPYLENE GLYCOL - INDUSTRIAL

7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8 . Exposure controls/personal protection

Consult local authorities for acceptable exposure limits.

Preventive Measures : Conditions of use, adequacy of engineering or other control measures, and actual exposures will dictate the need for specific protective devices at your workplace.

Engineering controls : Use local exhaust ventilation to maintain airborne concentrations below the TLV. Suitable respiratory equipment should be used in cases of insufficient ventilation or where operational procedures demand it. For guidance on engineering control measures refer to publications such as the ACGIH current edition of 'Industrial Ventilation, a manual of Recommended Practice.'

Personal protection

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

9 . Physical and chemical properties

General information

Appearance

Physical state : Liquid. [Liquid.]

Color : Colorless.

Odor : Characteristic.

Odor threshold : Not available.

Important health, safety and environmental information

pH : 6

Boiling point : 186 to 189°C (366.8 to 372.2°F)

Melting point : -59°C (-74.2°F)

Flash point : Closed cup: 99°C (210.2°F)

PROPYLENE GLYCOL - INDUSTRIAL

9 . Physical and chemical properties

Oxidizing properties	: Not available.
Vapor pressure	: 0.011 kPa (0.08 mm Hg)
Relative density	: 1.04
Octanol/water partition coefficient	: -1
Viscosity	: Kinematic: <0.2 cm^2/s (<20 cSt at 40°C)
Vapor density	: 2.6 [Air = 1]
Auto-ignition temperature	: 421°C (789.8°F)
VOC content	: 28% by ASTM D 2369

10 . Stability and reactivity

Stability and reactivity	: The product is stable.
Hazardous polymerization	: Under normal conditions of storage and use, hazardous polymerization will not occur.
Hazardous decomposition products	: Decomposition products may include the following materials: carbon dioxide carbon monoxide

11 . Toxicological information

Toxicity data

Acute toxicity

Product/ingredient name	test	Species	Result	Exposure
Propylene glycol	LD50 Oral	Rat	22000 to 31000 mg/kg	-
	LD50 Dermal	Rabbit	21000 mg/kg	-

Irritation/Corrosion

Potential acute health effects

Ingestion	: Aspiration hazard if swallowed. Can enter lungs and cause damage.
Inhalation	: No known significant effects or critical hazards.
Eyes	: No known significant effects or critical hazards.
Skin	: No known significant effects or critical hazards.

Potential chronic health effects

Target organs	: None known.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.

PROPYLENE GLYCOL - INDUSTRIAL

12 . Ecological information

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Propylene glycol	-1	-	low

Environmental effects : This product shows a low bioaccumulation potential.

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14 . Transport information

Transportation Emergency Number 1-800-424-9300 (CHEMTREC).

Regulatory information	UN number	Proper shipping name	Class	PG*	Label	Additional information
DOT Classification	Not regulated.					-
TDG Classification	Not regulated.					-
IMDG Class	Not regulated.		-	-		-
IATA-DGR Class	Not regulated.		-	-		-

PG* : Packing group

15 . Regulatory information

United States

HCS Classification : Not regulated.

U.S. Federal regulations : **United States inventory (TSCA 8b):** All components are listed or exempted.

CERCLA: Hazardous substances. : No ingredients listed.

SARA 313 : No ingredients listed.

This product does not contain nor is it manufactured with ozone depleting substances.

California Prop 65 : This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

Canada

WHMIS (Canada) : Not controlled under WHMIS (Canada).

PROPYLENE GLYCOL - INDUSTRIAL

15 . Regulatory information

CEPA (DSL) : All components are listed or exempted.

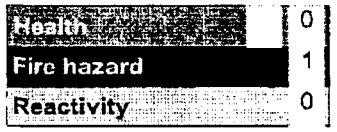
This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations) and this MSDS (Material Safety Data Sheet) contains all the information required by the CPR.

16 . Other information

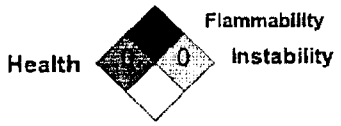
Label requirements : ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE.

THIS PRODUCT IS NOT TO BE USED TO PRODUCE FOGS OR MISTS IN THEATRICAL, MUSICAL, OR OTHER ENTERTAINMENT PERFORMANCES.

Hazardous Material Information System (U.S.A.) :



National Fire Protection Association (U.S.A.) :



Date of printing : **3/11/2009.**

Date of issue : **11 March 2009**

Date of previous issue : 8/5/2008

Notice to reader

While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.
IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.
THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.
NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE. NO PART OF THIS DATA SHEET MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM, OR BY ANY MEANS, WITHOUT PERMISSION IN WRITING FROM HUNTSMAN. ALL REQUESTS FOR PERMISSION TO REPRODUCE MATERIAL FROM THIS DATA SHEET SHOULD BE DIRECTED TO HUNTSMAN, MANAGER, PRODUCT SAFETY AT THE ABOVE ADDRESS.

◤ Indicates information that has changed from previously issued version.

MATERIAL SAFETY DATA SHEET

Section 1: Product & Company Identification

Product Name: **Siloo ® Ice Off ®**
Product Number (s): 22A

Manufactured By: CRC Industries, Inc. (215) 674-4300
885 Louis Drive, Warminster, PA 18974
24-Hour Emergency Information: CHEMTREC (800) 424-9300

Section 2: Composition/Information on Ingredients

Component	CAS NUMBER	ACGIH TLV	OSHA PEL	OTHER LIMITS	%
Methanol	67-56-1	200 ppm	200 ppm	NE	> 90
Propylene glycol	57-55-6	NE	NE	NE	< 10
Water	7732-18-5	NE	NE	NE	< 10
Carbon Dioxide	124-38-9	5000 ppm	10000 ppm	NE	< 10

Section 3: Hazards Identification

Emergency Overview

Appearance & Odor: Clear, water-white liquid.

Danger: Flammable. Vapor Harmful. May be fatal or cause blindness if swallowed. Contents Under Pressure.

Potential Health Effects:

- Inhalation: Drowsiness, nausea and vomiting.
- Eyes: Irritation
- Skin: Burning, itching and redness.
- Ingestion: Inebriation, headache, nausea, blindness and death.

Carcinogenicity: OSHA: No IARC: No NTP: No
Chronic Overexposure: NA
Medical Conditions Aggravated by Exposure: NA

Section 4: First Aid Measures

Inhalation: Remove to fresh air. Give artificial respiration if necessary.

Eyes: Flush with large amounts of water for 15 minutes.

Skin: Remove contaminated clothing and wash area with soap and water.

Ingestion: Call a physician. Induce vomiting.

Section 5: Fire-Fighting Measures

Flashpoint:	55 °F	Method:	TCC	LEL:	6.0	UEL:	36.5

Extinguishing Media: Carbon dioxide, dry chemical and foam.
Hazardous Combustion Products: Thermal - Carbon monoxide, CO_2
Fire-fighting Instructions: Remove containers from fire area if possible. Use self-contained breathing apparatus for fire fighting. Aerosol cans may explode if heated above 120°F.

NFPA:	Health:	2	Flammability:	3	Reactivity:	0		
HMIS:	Health:	2	Flammability:	3	Reactivity:	0	PPE:	B

Section 6: Accidental Release Measures

Spill/Leak Procedures: Usually not a problem with aerosols. Area should be ventilated. Absorbent should be used to pick up excess material. All used and unused product should be disposed of in accordance with federal, state and local regulations.

Section 7: Handling and Storage

Handling Procedures: Store in a cool, dry area. Aerosol cans must be maintained below 120°F to prevent cans from exploding.

Section 8: Exposure Controls/Personal Protection

Engineering Controls: Adequate to prevent accumulation of vapors. Use mechanical means if necessary to maintain levels below the exposure limits. If working in a confined space, follow applicable OSHA regulations.

Respiratory: Use NIOSH/MSHA compliant respirators or self-contained breathing apparatus above exposure limits. Follow OSHA regulations 29 CFR 1910.134.

Protective Clothing/Equipment: Wear chemically protective gloves and safety glasses. Use a splash apron and boots if splashing occurs.

Section 9: Physical & Chemical Properties

Physical State:	Liquid	Appearance & Odor:	Clear, water-white liquid.
Specific Gravity:	0.8031	Boiling Point:	147 °F
Freezing Point:	ND	Vapor Pressure:	96 mm
Evaporation Rate:	Fast	Vapor Density (air = 1)	1.11
pH:	NA	Solubility:	Complete with water.

Volatile Organic Compounds:%:	89.0	g/L:	729	lbs./gal:	6.08

Section 10: Stability and Reactivity

Stability:	Stable	Hazardous Polymerization:	No
Chemical Incompatibilities:	Strong oxidizers.		
Materials to Avoid:	Sources of ignition.		
Hazardous Decomposition Products:	None		

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. See Section 3 of this MSDS for acute symptoms of overexposure and carcinogenicity information.

Section 12: Ecological Information

Ecotoxicity:	No data available.
Environmental Fate:	No data available for biodegradation.

Section 13: Disposal Considerations

Disposal: This material if discarded may be hazardous waste under U.S. EPA RCRA regulations. All disposal activities must comply with federal, state and local regulations. Contact your local or state environmental agency for specific rules. Do not dump into sewers, on the ground or into any body of water.

Section 14: Transportation Information

Shipping Name:	Consumer Commodity				
Hazard Class:	ORM-D	UN Number:	NA	Packing Group:	NA
Label:	NA	Placard:	NA		
Special Provisions:	NA				

Section 15: Regulatory Information

TSCA:	All components are either listed under TSCA or are exempt.		
SARA Title III:	Section 311/312:	Acute, Pressure	Section 313*: Methanol
CERCLA/Superfund (RQ):		Mixture	
Extremely Hazardous Substances:		No	
California Prop 65:		No	

* See section 2 for percentage

Section 16: Additional Information

Prepared By:	Adam M. Selisker	Date:	March 19, 1999
Technical Information:	(800) 521-3168	CRC #:	638

This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label.

CAS:	Chemical Abstract Service	NA:	Not Applicable
ppm:	Parts per Million	ND:	Not Determined
TCC:	Tag Closed Cup	NE:	Not Established
LEL:	Lower Exposure Limit	g/L:	grams per Liter
UEL:	Upper Exposure Limit	lbs./gal:	pounds per gallon
PPE:	Personal Protection Equipment	RQ:	Reportable Quantity
COC:	Cleveland Closed Cup	TOC:	Tag Open Cup

MATERIAL SAFETY DATA SHEET

1. Product And Company Identification

MSDS ID: MSDS246
PRODUCT NAME: Prestone® Power Steering Fluid and Stop Leak
PRODUCT NUMBER: AS262, AS262-55, AS263
FORMULA NUMBER: 2199-17, 2187-116

MANUFACTURER:
Honeywell Consumer Products Group
39 Old Ridgebury Road
Danbury, CT 06810-5109

CANADIAN OFFICE:
Honeywell Consumer Products Group
3333 Unity Drive
Mississauga, Ontario L5L 3S6

INFORMATION PHONE NUMBER: (800)862-7737 (in the US) (800)668-9349 (in Canada)
EMERGENCY PHONE NUMBER: CHEMTREC (800)424-9300 (in the US) CANUTEC (613)996-6666 (in Canada)
MSDS DATE OF PREPARATION/REVISION: 3/14/07

PRODUCT USE: Automobile fluid – consumer product

2. Composition/Information On Ingredients

Component	CAS No.	Amount
Refined Petroleum Distillates	64741-88-4 64742-58-1	95-100
Heterocyclic Ether	Proprietary	0-2
Zinc Alkyldithiophosphate	Proprietary	0-1
Proprietary Additive	Proprietary	0-5

(See Section 8 for Exposure Limits)

3. Hazards Identification

Clear amber liquid with a mild petroleum odor.

EMERGENCY OVERVIEW

May cause mild transient eye and skin irritation. Oil injection into the skin from high-pressure hydraulic systems may cause severe injury. Seek medical attention immediately. Surgical removal may be necessary. Breathing high vapor concentrations may cause headache, dizziness, drowsiness or lung irritation. If the product is swallowed, there is a slight chance aspiration may occur resulting in lipid pneumonitis.

4. First Aid Measures

INHALATION: If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.

SKIN CONTACT: Remove contaminated clothing. Wash all affected and exposed areas with soap and water. If skin irritation or redness develops and persists, seek medical attention. High pressure injection of this product through the skin is a medical emergency. This product must be removed completely from under the skin. Seek immediate medical attention.

EYE CONTACT: Exposed eyes should be immediately flushed with copious amounts of water using a steady stream for a minimum of 15 minutes. If irritation, pain, swelling or tearing persist, seek medical attention.

INGESTION: If swallowed, get immediate medical attention by calling an emergency room or poison control center. Do not make the person vomit. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency center or hospital. If vomiting occurs spontaneously, keep head below hips to prevent aspiration into the lungs. Never give anything by mouth to a person who is unconscious or drowsy.

NOTES TO PHYSICIAN: There is no specific antidote. The petroleum oil and other ingredients in this product are unlikely to produce systemic symptoms following accidental ingestion. Upon ingestion, there is a slight risk of aspiration in the lungs which can lead to pneumonitis and non-cardiogenic pulmonary edema. Do not induce vomiting. If aspiration is suspected the patient should be observed for sign of lung injury. Treatment should be directed at the control of symptoms and clinical conditions. Subcutaneous or intramuscular injection requires prompt surgical debridement. There may be no signs of injury or pain initially. Failure to provide immediate treatment may result in extensive necrosis.

5. Firefighting Measures

EXTINGUISHING MEDIA: Use water fog, foam, carbon dioxide or dry chemical. Cool fire exposed containers with water. Water may cause frothing.

SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

UNUSUAL FIRE HAZARDS: This product can burn but will not readily ignite. Vapors may be released when heated above the flashpoint that can ignite when exposed to an ignition source. In enclosed spaces, heated vapor can ignite with explosive force. Mists or sprays may burn at temperatures below the flashpoint. Containers may rupture from excessive heat.

HAZARDOUS COMBUSTION PRODUCTS: Burning may produce carbon monoxide, carbon dioxide, traces oxides of sulfur, phosphorous, zinc and nitrogen.

6: Accidental Release Measures

Wear appropriate protective clothing and equipment (See Section 8). Collect material with an inert absorbent material and shovel into appropriate container for disposal. For large spill, recover free product by pumping and place in appropriate, labeled container. This product can create a spill hazard. Keep out of sewers, watercourses and low areas.

7. Handling and Storage

Avoid contact with the eyes.
Avoid prolonged or repeated contact with skin and clothing.
Avoid breathing vapors or mists.
Use with adequate ventilation.
Wash exposed skin with soap and water after use.
Keep container away from excessive heat and open flames.
Keep containers closed when not in use.
Store in a cool, dry, well ventilated area.
Empty containers retain product residue and may be hazardous. Do not cut, weld, drill, etc. containers, even empty. Do not reuse empty containers unless properly cleaned.

8. Exposure Controls / Personal Protection

EXPOSURE LIMITS

CHEMICAL	EXPOSURE LIMIT
Petroleum Distillates	500 ppm TWA OSHA PEL
Heterocyclic Ether	None Established
Zinc Alkyldithiophosphate	None Established
Proprietary Additive	None Established

VENTILATION: None needed under normal use conditions. For operations where the TLV for oil mist may be exceeded, forced ventilation such as local exhaust is required to maintain exposures below the occupational exposure limits.

RESPIRATORY PROTECTION: None under normal use conditions. For operations where the TLV for oil mist may be exceeded, a NIOSH/MSHA approved respirator with an organic vapor cartridge and a dust/mist prefilter or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration. Select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

GLOVES: Impervious gloves such as heavy nitrile or neoprene are recommended where prolonged skin contact may occur. Use heat-resistant gloves when handling product at elevated temperatures.

EYE PROTECTION: Safety glasses or chemical splash goggles are recommended.

OTHER PROTECTIVE EQUIPMENT/CLOTHING: Appropriate protective clothing as needed to minimize skin contact. Suitable eye flushing facilities should be available in the work area. Contaminated clothing should be immediately removed and laundered before re-use.

9. Physical and Chemical Properties

APPEARANCE AND ODOR: Clear amber liquid with a mild petroleum odor. There is no odor threshold for this product.

pH: N/A
BOILING POINT (F): Not determined
FREEZING POINT (F): Not applicable
SOLUBILITY IN WATER: Insoluble
VISCOSITY: 44-47cSt @ 40°C
SPECIFIC GRAVITY: 0.88
VAPOR PRESSURE: <0.1 mm Hg @ 20°C
VAPOR DENSITY: Greater than 1
PERCENT VOLATILE: Negligible
EVAPORATION RATE: Not determined
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not determined
FLASH POINT: >300°F (149°C)
AUTOIGNITION TEMP: Not Determined
FLAMMABILITY LIMITS: Not determined

10. Stability and Reactivity

STABILITY: Stable
CONDITIONS TO AVOID: Keep away from heat, sparks and open flames.
INCOMPATIBILITY: Strong oxidizing agents, acid and caustics.
HAZARDOUS DECOMPOSITION PRODUCTS: Combustion will produce carbon monoxide, carbon dioxide, traces of oxides of sulfur, phosphorous, zinc and nitrogen.
HAZARDOUS POLYMERIZATION: Will not occur.

11. Toxicological Information

POTENTIAL HEALTH EFFECTS:

ACUTE HAZARDS:
INHALATION: Inhalation of the product is unlikely with normal use. Prolonged exposure to mists or vapors in a poorly ventilated areas may result in dizziness, drowsiness, headache, nausea and in extreme cases, lipid pneumonitis.

SKIN CONTACT: Contact may cause may cause slight reddening and irritation. High pressure injection of this product through the skin may cause possible extensive tissue damage resulting in loss of a finger, hand or arm. There may be no sign of initial injury or pain.

EYE CONTACT: Direct eye contact may result in mild inflammation or irritation.

INGESTION: Ingestion of this product is not expected to result in any acute systemic toxic effects. If more than several mouthfuls are swallowed, abdominal discomfort, headache, drowsiness, belching, nausea, vomiting and diarrhea may occur. There is a slight chance aspiration into the lungs during ingestion or vomiting following ingestion may result in lipid pneumonitis.

CHRONIC HAZARDS: Prolonged or repeated skin contact may remove skin oil, leading to possible skin irritation or dermatitis.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Prolonged or repeated skin contact may aggravate an existing skin condition such as acne, seborrhea or dermatitis.

CARCINOGEN: None of the components of this product present at greater than 0.1% are listed as carcinogens by OSHA, IARC or NTP.

Acute Toxicity Values:

No toxicity data available.

12. Ecological Information

No ecotoxicity data is available for this product or its components this time.

13. Disposal Considerations

Recycle, incinerate or landfill in accordance with all local, state/provincial and federal regulations.

14. Transport Information

U.S. DOT HAZARD CLASSIFICATION

U.S. DOT HAZARD CLASSIFICATION
PROPER SHIPPING NAME: Not Regulated
TECHNICAL NAME: None
UN NUMBER: None
HAZARD CLASS/PACKING GROUP: Not Applicable
LABELS REQUIRED: None

DOT MARINE POLLUTANTS: This product does not contain Marine Pollutants as defined in 49 CFR 171.8.

IMDG CODE SHIPPING CLASSIFICATION
DESCRIPTION: Not Regulated
ID NUMBER: None
HAZARD CLASS: None
PACKING GROUP: None
LABELS REQUIRED: Not Applicable
PLACARDS REQUIRED: None

15. Regulatory Information

EPA SARA 311/312 HAZARD CLASSIFICATION: Not hazardous

EPA SARA 313: This Product Contains the Following Chemicals Subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372):

Zin Alkyldithiophosphate (zinc compound) 0-1%

PROTECTION OF STRATOSPHERIC OZONE: This product is not known to contain or to have been manufactured with ozone depleting substances as defined in 40 CFR Part 82, Appendix A to Subpart A.

CERCLA SECTION 103: This product is not subject to CERCLA reporting requirements, however, oil spills are reportable to the National Response Center under the Clean Water Act. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

EPA TSCA INVENTORY: All of the components of this material are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

CALIFORNIA PROPOSITION 65: This product contains the following chemicals regulated under California Proposition 65:

Toluene (developmental)	108-88-3	0.0009%
Propylene oxide (cancer)	75-56-9	0.0001%
Ethyl Acrylate (cancer)	140-78-6	0.0003%
Benzo(a) anthracene (cancer)	56-55-3	<0.001%
Benzo(k) fluoroanthene (cancer)	207-08-9	<0.001%
Benzo(a) pyrene (cancer)	50-32-8	<0.001%
Benzo(b) fluoranthene	205-99-2	<0.001%
Chrysene (cancer)	218-01-9	<0.001%
Debenz (a,h) anthracene (cancer)	53-70-3	<0.001%
Indeno(1,2,3-cd)pyrene (cancer)	193-39-5	<0.001%

CANADIAN ENVIRONMENTAL PROTECTION ACT: All of the ingredients are listed on the Canadian Domestic Substances List.

CANADIAN WHMIS CLASSIFICATION: Not classified as hazardous

AUSTRALIA: All of the ingredients of this product are listed on the Australian Inventory of Chemical Substances.

JAPAN: One or more of the ingredients of this product are not listed on the Japanese Existing and New Chemical Substances (MITI) List.

KOREA: All of the ingredients of this product are listed on the Korean Existing Chemical List (KECL).

PHILIPPINES: All of the ingredients of this product are listed on the Philippine Inventory of Chemical and Chemical Substance (PICCS)

CHINA: One or more of the ingredients of this product are not listed on the Chinese Inventory of Existing Chemical Substances (IECSC).

This MSDS has been prepared according to the criteria of the Controlled Products Regulation (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Rating: Fire: 1 Health: 0 Reactivity: 0

REVISION SUMMARY: All: New Format

This MSDS is directed to professional users and bulk handlers of the product. Consumer products are labeled in accordance with Federal Hazardous Substances Act regulations.

While Prestone Products Corporation believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of tests conducted, the data are not to be taken as a warranty or representation for which Prestone Products Corporation assumes legal responsibility. They are offered for your consideration, investigation and verification. Any use of these data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

If more information is needed, please contact:

Technical Services
Prestone Products Corporation
69 Eagle Road
Danbury, CT 06810
(800) 862-7737

MATERIAL SAFETY DATA SHEET

MSDS Number: 1402E

Section 1 **PRODUCT AND COMPANY IDENTIFICATION**

Trade Name: OATEY PURPLE or CLEAR PRIMER NSF LISTED
Product Nos.: Purple - 30755, 30756, 30757, 30758, 30759, 30927 Clear - 30749, 30750, 30751, 30752, 30753, 30754, 31652, 31653
Product Use: Primer for PVC and CPVC Plastic Pipe
Formula: See section 2
Synonyms: Plastic Pipe Primer
Firm Name & Address: Oatey Company 4700 West 160th Street, Cleveland, Ohio 44135 www.oatey.com
Firm Phone No: (216) 267-7100
Emergency Phone Nos.: For Emergency First Aid call 1-877-740-5015. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1-703-527-3887.
Prepared by: Technical Department
Preparation Date: 11/01/2009

Section 2 **HAZARDS IDENTIFICATION**

Emergency Overview:
Purple or Clear
liquid with an ether-like odor. Extremely flammable liquid and vapor. Vapors may cause flash fire. May cause eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects. Swallowing may cause irritation, nausea, vomiting, diarrhea and kidney or liver disorders. Aspiration hazard. May be fatal if swallowed. Symptoms may be delayed.

Section 3 **COMPOSITION/INFORMATION ON INGREDIENTS**

INGREDIENTS:	%wt/wt :	CAS NUMBER:	ACGIH TLV TWA:	OSHA PEL TWA	OTHER:
Tetrahydrofuran	15 – 30%	109-99-9	50 ppm(skin) 100 ppm STEL	200 ppm	25 ppm (Mfg)
Methyl Ethyl Ketone	25 – 40%	78-93-3	200 ppm 300 ppm	200 ppm	None
Acetone	25 – 40%	67-64-1	500 ppm 750 ppm STEL	1000 ppm	None
Cyclohexanone	15 – 30%	108-94-1	20 ppm(skin) 50 ppm STEL	50 ppm	None

OSHA Hazard Classification: Flammable, irritant, organ effects

Section 4 **FIRST AID MEASURES**

Skin: Remove contaminated clothing immediately. Wash all exposed areas with soap and water. Get medical attention if irritation develops. Remove dried cement with hand cleaner or baby oil.
Eyes: If material gets into eyes or if fumes cause irritation, immediately flush eyes with plenty of water until chemical is removed. If irritation persists, get medical attention immediately.

Inhalation:	If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.
Ingestion:	**DO NOT INDUCE VOMITING.** Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

Section 5 FIRE FIGHTING MEASURES

Flashpoint / Method:	14 - 23 Degrees F. (-10 to -5 Degrees C) / CCCFP
Flammability:	LEL = 1.8 % Volume, UEL = 11.8 % Volume
Extinguishing Media:	Use dry chemical, CO_2, or foam to extinguish fire. Cool fire exposed container with water. Water may be ineffective as an extinguishing agent.
Special Fire Fighting Procedure:	Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored
Unusual Fire And Explosion Hazards:	Extremely flammable liquid. Keep away from heat and all sources of ignition including sparks, flames, lighted cigarettes and pilot lights. Containers may rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.
Hazardous Decomposition Products:	Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

Section 6 ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures:	Remove all sources of ignition and ventilate area. Stop leak if it can be done without risk. Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high. Soak up spill with an inert absorbent such as sand, earth or other non-combusting material. Put absorbent material in covered, labeled metal containers. Prevent liquid from entering watercourses, sewers and natural waterways. Report releases to authorities as required. See Section 13 for disposal information.

Section 7 HANDLING AND STORAGE

Handling:	Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use.
Storage:	Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.
Other:	"Empty" containers retain product residue and can be hazardous. Follow all MSDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

Section 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation:	Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that flammable concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.
Respiratory Protection:	For operations where the exposure limit may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance

	with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.
Skin Protection:	Rubber gloves are suitable for normal use of the product. For long exposures chemical resistant gloves may be required such as 4H(tm) or Silver Shield(tm) to avoid prolonged skin contact.
Eye Protection:	Safety glasses with side shields or safety goggles.

Section 9 PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	151 Degrees F / 66 Degrees C
Melting Point:	Not applicable
Vapor Pressure:	145 mmHg @ 20 Degrees C
Vapor Density:	(Air = 1) 2.5
Volatile Components:	99.96%
Solubility In Water:	Negligible
pH:	Not applicable
Specific Gravity:	0.84 +/- 0.02 @ 20 Degrees C
Evaporation Rate:	(BUAC = 1) = 5.5 - 8.0
Appearance:	Purple or Clear Liquid
Odor:	Ether-Like
Will Dissolve In:	Tetrahydrofuran
Material Is:	Liquid

Section 10 STABILITY AND REACTIVITY

Stability:	Stable.
Conditions To Avoid:	Avoid heat, sparks, flames and other sources of ignition.
Hazardous Decomposition Products:	Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.
Incompatibility/ Materials To Avoid:	Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.
Hazardous Polymerization:	Will not occur.

Section 11 TOXICOLOGICAL INFORMATION

Inhalation:	Vapors or mists may cause mucous membrane and respiratory irritation, coughing, headache, dizziness, dullness, nausea, shortness of breath and vomiting. High concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.	
Skin:	May cause irritation with redness, itching and pain. Methyl ethyl ketone and cyclohexanone may be absorbed through the skin causing effects similar to those listed under inhalation.	
Eye:	Vapors may cause irritation. Direct contact may cause irritation with redness, stinging and tearing of the eyes. May cause eye damage.	
Ingestion:	Swallowing may cause abdominal pain, nausea, vomiting and diarrhea. Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.	
Chronic Toxicity:	Prolonged or repeated overexposure cause dermatitis and damage to the kidney, liver, lungs and central nervous system.	
Toxicity Data:	Acetone:	Oral rat LD50: 5,800 mg/kg Inhalation rat LC50: 50,100 mg/m3/8 hours
	Cyclohexanone:	Oral rat LD50: 1,620 mg/kg Inhalation rat LC50: 8,000 ppm/4 hours Skin rabbit LD50: 1 mL/kg

Tetrahydrofuran:	Oral rat LD50: 1,650 mg/kg Inhalation rat LC50: 21,000 ppm/3 hours
Methyl Ethyl Ketone:	Oral rat LD50: 2,737 mg/kg Inhalation rat LC50: 23,500 mg/m3/8 hours Skin rabbit LD50: 6,480 mg/kg

Sensitization: None of the components are known to cause sensitization.

Carcinogenicity: None of the components are listed as a carcinogen or suspect carcinogen by NTP, IARC or OSHA. The National Toxicology Program has reported that exposure of mice and rats to tetrahydrofuran (THF) vapor levels up to 1800 ppm 6 hr/day, 5 days/week for their lifetime caused an increased incidence of kidney tumors in male rats and liver tumors in female mice. The significance of these findings for human health is unclear at this time, and may be related to "species specific" effects. Elevated incidences of tumors in humans have not been reported for THF. ACGIH has classified cyclohexanone (CYH) and tetrahydrofuran as “A3,” Confirmed Animal Carcinogens with Unknown Relevance to Humans.

Mutagenicity: Cyclohexanone has been positive in bacterial and mammalian assays. Acetone, methyl ethyl ketone and tetrahydrofuran are generally thought not to be mutagenic.

Reproductive Toxicity: Methyl ethyl ketone and cyclohexanone have been shown to cause embryofetal toxicity and birth defects in laboratory animals. Acetone and tetrahydrofuran has been found to cause adverse developmental effects only when exposure levels cause other toxic effects to the mother.

Medical Conditions Aggravated By Exposure: Persons with pre-existing skin, lung, kidney or liver disorders may be at increased risk from exposure to this product.

Section 12 ECOLOGICAL INFORMATION

This product is not expected to be toxic to aquatic organisms.
Cyclohexanone: 96 hour LC50 values for fish is over 100 mg/l.
Tetrahydrofuran: 96 hour LC50 fathead minnow: 2160 mg/L.
Acetone: 96 hour LC50 for fish is greater than 100 mg/L.
Methyl Ethyl Ketone: 96 hour LC50 for fish is greater than 100 mg/L.

VOC Information: This product emits VOC’s (volatile organic compounds) in its use. Make sure that use of this product complies with local VOC emission regulations, where they exist.

VOC Level: Maximum 550 g/L per SCAQMD Test Method 316A.

Section 13 DISPOSAL CONSIDERATIONS

Waste Disposal:	Dispose in accordance with current local, state and federal regulations.
RCRA Hazardous Waste Number:	U002, U057, U159, U213
EPA Hazardous Waste ID Number:	D001, D035, F003, F0005
EPA Hazard Waste Number:	Ignitable Waste. Toxic Waste (Methyl Ethyl Ketone content)

Section 14 TRANSPORT INFORMATION

DOT	Less than 1 Liter (0.3 gal)	Greater than 1 Liter (0.3 gal)
UN/NA Number:	None	UN1993
Proper Shipping Name:	Consumer Commodity	Flammable Liquid, NOS (Methyl Ethyl Ketone, Acetone)
Hazard Class:	ORM-D	3

Packing Group:	None	PGII
Hazard Labels:	None	Flammable Liquid
IMDG		
UN Number:	UN1993	UN1993
Proper Shipping Name:	Flammable Liquid, NOS (Limited Quantity)	Flammable Liquid, NOS (Methyl Ethyl Ketone, Acetone)
Hazard Class:	3	3
Packing Group:	II	II
Label:	None (Limited Quantities are expected from labeling)	Class 3 (Flammable Liquid)
Flashpoint (deg C)	-10 to -5 Degrees C	-10 to -5 Degrees C

2008 North American Emercency Response Guidebook Number: 127

Section 15 REGULATORY INFORMATION

Hazard Category for Section 311/312:	Acute Health, Chronic Health, Flammable
Section 302 Extremely Hazardous Substances (TPQ):	This product does not contain chemicals regulated under SARA Section 302.
Section 313 Toxic Chemicals:	This product does not contain chemicals subject to SARA Title III Section 313 Reporting requirements.
CERCLA 103 Reportable Quantity:	Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for the product, based on the RQ for Tetrahydrofuran (30% maximum) of 1,000 lbs, is 3,333 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.
California Proposition 65:	This product does not contain any chemicals subject to California Proposition 65 regulations.
TSCA Inventory	All of the components of this product are listed on the TSCA inventory.
Canadian WHIMS Classification:	Class B, Division 2; Class D, Division 2, Subdivision B; Class D, Division 2, Subdivision A. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Section 16 OTHER INFORMATION

NFPA and HMIS:	
NFPA Hazard Signal:	Health: 2 Flammability: 3 Reactivity: 1 Special: None
HMIS Hazard Signal:	Health: 2* Flammability: 3 Reactivity: 1 PPE: G

Disclaimer:
The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, we cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use.

Template: tmpl-us-e1

FACTS Faxed FAST!℠

OSHA-Required Health And Safety Information!

This Material Safety Data Sheet (MSDS) was requested moments ago from Hercules Automated Fax Information System. Please forward it immediately to the person in charge of MSDS's, or retain it at the machine until claimed.

Section 1

MATERIAL SAFETY DATA SHEET # 62

Hercules PVC & CPVC Purple Primer

HERCULES® MATERIAL SAFETY INFORMATION SERVICE℠

Date Prepared: 1/7/1992 **Last Reviewed:** 1/26/2009

Meets OSHA 29 CFR 1910.1200

Hercules Chemical Company Inc.
111 South Street
Passaic NJ 07055
Phone (800) 221-9330
Fax (800) 333-3456

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
Tetrahydrofuran(109-99-9)	200PPM	200PPM		
Methyl Ethyl Ketone (78-93-3)	200PPM	200PPM	N/A	- -
Cyclohexanone (108-94-1)	50PPM	20PPM	N/A	
Acetone (67-64-1)	1000PPM	500PPM	750 STEL	

HMIS Hazard Rating: Health: 3 Flammability: 4 Reactivity: 1 Personal Protection: G

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H2O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
133° F Based on first boiling component - Acetone	0.820 ± 0.03	2.0 to 2.5	400 @ 104° F Based on first boiling component- Acetone

Melting Point (° F):	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	VOC Level (g/l):
N/A	7-11	50% to 75%	510

Appearance And Color: Purple Liquid **Odor:** Ethereal & Acetone-like

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits: LEL:	UEL:
0 to -4° F (T.C.C.) (Based on Acetone)	2%	13.0%

Extinguishing Media: Foam/Dry Chemical/Carbon Dioxide

Special Firefighting Procedures:
Handle as flammable liquid. Wear self-contained breathing apparatus & chemical goggles. Water may be ineffective, but should be used to keep fire-exposed containers cool.

Unusual Fire And Explosion Hazards:
Vapor is heavier than air and travels considerable distance to source of ignition and flashback. On long standing may form peroxides which may cause violent reaction especially upon evaporation to dryness.

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** Keep in closed containers away from sparks & open flame.

Incompatibility (Materials To Avoid): Strong oxidizing materials, Lithium Aluminum Hydride, Sodium Aluminum Hydroxide, Sodium & Potassium Hydroxides

Hazardous Decomposition: Carbon dioxide and carbon monoxide are formed. Irritating peroxide fumes formed when heated to decomposition.

Hazardous Polymerization: Avoid excessive exposure to air and cationic initiators like Lewis Acids.

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation** YES/Primary **Skin** YES/Primary **Ingestion** YES/Secondary

Health Hazards:

Corrosive to eyes and skin irritant. Severe overexposure can cause headache, dizziness and narcosis. May cause dermatosis and dermatitis with prolonged repeated contact.

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

INGESTION: No effects expected from ingestion of small amount. INHALATION: Will cause irritation of mucous membranes, nose, eyes, & throat; coughing, difficulty of breathing. Exposure to high vapor concentration may cause headache, dizziness, nausea, narcosis. SKIN CONTACT: Prolonged skin contact causes common solvent defatting effect. EYE CONTACT: Vapors slightly uncomfortable. Splashes irritating. Will cause painful burning or stinging of eyes & lids, watering of eyes and Conjunctiva.

Medical Conditions Generally Aggravated By Exposure:

No data found

Emergency And First Aid Procedures:

INGESTION: DO NOT INDUCE VOMITING. If conscious, dilute by giving 2 glasses of water. Call physician immediately. INHALATION: Remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call physician. SKIN CONTACT: Wash affected area with soapy water. Remove contaminated clothing. EYE CONTACT: Immediately flush eyes with plenty of water for 15 minutes. Consult physician.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:

Steps To Be Taken In Case Material Is Released Or Spilled:

Eliminate sources of ignition. Absorb with sand or inert absorbing material. Dispose of with solid waste in accordance with all regulations. Flush spill area with water, avoid flushing into confined areas.

Waste Disposal Method:

Incinerate in accordance with federal, state and local regulations.

Precautions To Be Taken In Handling And Storing:

Store in cool, well-ventilated area. Keep away from open flame and sources of ignition.

Other Precautions:

Use normal good personal hygiene.

Section 8 - Control Measures:

Respiratory Protection:

In confined spaces, or other circumstances where adequate ventilation cannot be assured, use NIOSH approved respirator, positive-pressure airline mask or SCBA Self-Contained Breathing Apparatus.

Ventilation: **Local Exhaust** As required

Mechanical All ventilating devices must be located so they do not provide a source of ignition.

Special When using cements in an area of limited ventilation, use a ventilation device such as a fan or air mover to maintain a safe air concentration.

Other: N/A

Gloves: PVA gloves.

Eye Protection: Chemical safety goggles.

Other Protective Clothing: Apron, boots, eye bath, safety shower.

Work/Hygienic Practices Wash thoroughly after handling. Avoid ingestion of the cements. Do not eat or drink when using cements or in the vicinity where such cements are being used.

HERCULES® MATERIAL SAFETY INFORMATION SERVICE™

FACTS Faxed FAST!

For Hercules Material Safety Data Sheets by fax anytime, day or night, just call 1-800-942-INFO (1-800-942-4636) from any Touch-Tone phone. Have your fax number ready. Checking the product label for the correct MSDS # will save time.

SAFETY DATA SHEET

1. Identification

Product identifier **Hercules Pro Dope**

Other means of identification

Product code 7377E

Synonyms Part Numbers: 15420, 15427, 15433, 15435, 15445

Recommended use Not available.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company Name HCC Holdings, Inc. an Oatey Affiliate

Address 4700 West 160th Street
Cleveland, OH 44135

Telephone 216-267-7100

E-mail info@oatey.com

Transport Emergency Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)

Emergency First Aid 1-877-740-5015

Contact person MSDS Coordinator

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Sensitization, skin Category 1

OSHA defined hazards Not classified.

Label elements

Signal word Warning

Hazard statement May cause an allergic skin reaction.

Precautionary statement

Prevention Avoid breathing mist or vapor. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves.

Response If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Storage Store away from incompatible materials.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Calcium carbonate	1317-65-3	50-60
Petroleum-based Lubricating Oil	64741-88-4	20-40
Kaolin	1332-58-7	10-20
Menhaden oil	8002-50-4	1-5

Quartz	14808-60-7	<1

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.

Most important symptoms/effects, acute and delayed Upper respiratory tract irritation. Irritation of eyes and mucous membranes. Coughing. Skin irritation. May cause an allergic skin reaction. Dermatitis. Rash.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Use care in handling/storage.

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Calcium carbonate (CAS 1317-65-3)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Kaolin (CAS 1332-58-7)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Petroleum-based Lubricating Oil (CAS 64741-88-4)	PEL	5 mg/m3	Mist.
		2000 mg/m3	
		500 ppm	

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Quartz (CAS 14808-60-7)	TWA	0.3 mg/m3	Total dust.
		0.1 mg/m3	Respirable.
		2.4 mppcf	Respirable.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Kaolin (CAS 1332-58-7)	TWA	2 mg/m3	Respirable fraction.
Quartz (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Calcium carbonate (CAS 1317-65-3)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Kaolin (CAS 1332-58-7)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Petroleum-based Lubricating Oil (CAS 64741-88-4)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
Quartz (CAS 14808-60-7)	TWA	0.05 mg/m3	Respirable dust.

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Face shield is recommended. Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form	Liquid. Paste.
Color	Gray.
Odor	Fish oil
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	> 212.0 °F (> 100.0 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	30000 cP
Other information	
VOC (Weight %)	11 g/l

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Acids. Fluorine.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	May cause an allergic skin reaction.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Irritation of eyes and mucous membranes. Upper respiratory tract irritation. Coughing. May cause an allergic skin reaction. Dermatitis. Rash. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

Information on toxicological effects

Acute toxicity	May cause an allergic skin reaction.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	May cause an allergic skin reaction.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.)

IARC Monographs. Overall Evaluation of Carcinogenicity

Quartz (CAS 14808-60-7)	1 Carcinogenic to humans.

NTP Report on Carcinogens

Quartz (CAS 14808-60-7)	Known To Be Human Carcinogen.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
One or more components are not listed on TSCA.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Calcium carbonate (CAS 1317-65-3)
Kaolin (CAS 1332-58-7)
Petroleum-based Lubricating Oil (CAS 64741-88-4)
Quartz (CAS 14808-60-7)

US. New Jersey Worker and Community Right-to-Know Act

Calcium carbonate (CAS 1317-65-3)
Kaolin (CAS 1332-58-7)
Petroleum-based Lubricating Oil (CAS 64741-88-4)
Quartz (CAS 14808-60-7)

US. Pennsylvania Worker and Community Right-to-Know Law

Calcium carbonate (CAS 1317-65-3)
Kaolin (CAS 1332-58-7)
Quartz (CAS 14808-60-7)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Methanol (CAS 67-56-1)
Quartz (CAS 14808-60-7)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 05-February-2015

Revision date -

Version # 01

HMIS® ratings Health: 1
Flammability: 0
Physical hazard: 0

NFPA ratings

Disclaimer HCC Holdings Inc. an Oatey Affiliate cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

Safety Data Sheet

Revision Number: 001.2 **Issue date:** 10/10/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: **OSI Green Series Formula 38 Drywall & Metal Framing Adhesive**
IDH number: 1498717
Product type: Water based adhesive
Restriction of Use: None identified
Region: United States
Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067
Contact information:
Telephone: +1 (800) 624-7767
MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711 TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW	
WARNING:	ABRASION COULD RELEASE RESPIRABLE PARTICLES OF SILICA QUARTZ, A CANCER HAZARD BY INHALATION. NORMAL USE OF THIS PRODUCT CAUSES NO SUCH RELEASE. CAUSES SERIOUS EYE IRRITATION.

HAZARD CLASS	HAZARD CATEGORY
EYE IRRITATION	2A

PICTOGRAM(S)

Precautionary Statements

Prevention:
Wash thoroughly after handling. Wear eye and face protection.

Response:
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. If eye irritation persists: Get medical attention.

Storage: Not prescribed
Disposal: Not prescribed

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Limestone	1317-65-3	30 - 60
Kaolin	1332-58-7	1 - 5
Ethylene glycol	107-21-1	1 - 5

Quartz (SiO2)	14808-60-7	0.1 - 1

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation: If inhaled, immediately remove the affected person to fresh air. Get immediate medical attention.

Skin contact: Wash affected area immediately with soap and water.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. If symptoms develop and persist, get medical attention.

Ingestion: Consult a physician if necessary.

Symptoms: See Section 11.

Notes to physician: Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Extinguishing media: Water spray (fog), foam, dry chemical or carbon dioxide.

Special firefighting procedures: Use water spray to keep fire exposed containers cool and disperse vapors.

Unusual fire or explosion hazards: Closed containers may rupture (due to build up of pressure) when exposed to extreme heat.

Hazardous combustion products: Oxides of carbon. Oxides of nitrogen.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not allow product to enter sewer or waterways.

Clean-up methods: Scrape up spilled material and place in a closed container for disposal. Dispose of according to Federal, State and local governmental regulations.

7. HANDLING AND STORAGE

Handling: Avoid prolonged or repeated skin contact with this material. Keep out of the reach of children.

Storage: For safe storage, store at or above 0 °C (32°F)
Keep from freezing. Store in a cool, dry area. Keep containers closed when not in use.

For information on product shelf life, please review labels on container or check the Technical Data Sheet.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Limestone	10 mg/m3 TWA Total dust.	5 mg/m3 PEL Respirable fraction. 15 mg/m3 PEL Total dust.	None	None
Kaolin	2 mg/m3 TWA Respirable fraction.	15 mg/m3 PEL Total dust. 5 mg/m3 PEL Respirable fraction.	None	None
Ethylene glycol	100 mg/m3 Ceiling Aerosol.	None	None	None
Quartz (SiO2)	0.025 mg/m3 TWA Respirable fraction.	2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.	None	None

Engineering controls: Ventilation should effectively remove and prevent buildup of any dust generated from the handling of this product.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Eye/face protection: Safety goggles or safety glasses with side shields.

Skin protection: Use impermeable gloves and protective clothing as necessary to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Paste
Color: Tan
Odor: Mild
Odor threshold: Not available.
pH: 7.2 - 7.8
Vapor pressure: 15 mm hg (20.0 °C (68°F))
Boiling point/range: 100 °C (212°F)
Melting point/ range: Not available.
Specific gravity: 1.224
Vapor density: Heavier than air
Flash point: No flashpoint. Aqueous preparation.
Flammable/Explosive limits - lower: Not available.
Flammable/Explosive limits - upper: Not available.
Autoignition temperature: Not available.
Evaporation rate: < 0.6 (Butyl acetate = 1)
Solubility in water: Soluble
Partition coefficient (n-octanol/water): Not available.
VOC content: < 0.1 %; 49 g/l (calculated)
Viscosity: Not available.
Decomposition temperature: Not available.

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.

Hazardous reactions: Will not occur.

Hazardous decomposition products: Oxides of carbon. Oxides of nitrogen.

Incompatible materials: This product may react with oxidizing agents.

Reactivity: Not available.

Conditions to avoid: Heat. Do not freeze.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Inhalation, Skin contact

Potential Health Effects/Symptoms

Inhalation: May cause irritation to nose and throat. Abrasion of cured material such as by sanding or grinding could release respirable particles of silica quartz, a cancer hazard by inhalation. Normal use of this product causes no such release.

Skin contact: May cause slight irritation to skin.

Eye contact: May cause slight irritation to eyes on contact.

Ingestion: Not expected to be harmful by ingestion. Ingestion of large amounts may produce gastrointestinal disturbances including irritation, nausea, and diarrhea.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Limestone	None	Nuisance dust
Kaolin	Oral LD50 (RAT) = > 5,000 mg/kg Dermal LD50 (RAT) = > 5,000 mg/kg	Nuisance dust
Ethylene glycol	Oral LD50 (RAT) = 5.89 g/kg Dermal LD50 (RABBIT) = 9,530 mg/kg	Blood, Bone Marrow, Central nervous system, Developmental, Eyes, Irritant, Kidney, Liver, Metabolic
Quartz (SiO2)	None	Immune system, Lung, Some evidence of carcinogenicity

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Limestone	No	No	No
Kaolin	No	No	No
Ethylene glycol	No	No	No
Quartz (SiO2)	Known To Be Human Carcinogen.	Group 1	No

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Dispose of according to Federal, State and local governmental regulations.

Hazardous waste number: It is the responsibility of the user to determine if an item is hazardous as defined in the Resource Conservation and Recovery Act (RCRA) at the time of disposal. Product uses, transformations, mixtures, processes, etc., may render the resulting material hazardous, under the criteria of ignitability, corrosivity, reactivity and toxicity characteristics of the Toxicity Characteristics Leaching Procedure (TCLP) 40 CFR 261.20-24.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name:	Not regulated
Hazard class or division:	None
Identification number:	None
Packing group:	None

International Air Transportation (ICAO/IATA)

Proper shipping name:	Not regulated
Hazard class or division:	None
Identification number:	None
Packing group:	None

Water Transportation (IMO/IMDG)

Proper shipping name:	Not regulated
Hazard class or division:	None
Identification number:	None
Packing group:	None

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

TSCA 12 (b) Export Notification: None above reporting de minimis

CERCLA/SARA Section 302 EHS: None above reporting de minimis

CERCLA/SARA Section 311/312: Immediate Health, Delayed Health

CERCLA/SARA Section 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Ethylene glycol (CAS# 107-21-1).

California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

Prepared by: Mary Ellen Roddy, Sr. Regulatory Affairs Specialist

Issue date: 10/10/2014

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Product Information

Product Name: **OSI Pro Series SF 400 Subfloor & Construction Adhesive-09/09/2002**

Form: cartridge

Product Category: Home maintenance » multipurpose » Adhesive
Home maintenance » subfloor » Adhesive
Home maintenance » adhesive, subfloor » Floor

Customer Service: 0

Date Entered: 2005-01-14

Related Items: Products with similar usage in this database

Manufacturer

Manufacturer: OSI Sealants, Inc
Div., Henkel

Address: One Henkel Way

City: Rocky Hill

State: CT

Zip Code: 06067

Fax Number: 440-250-7873

Toll Free Number: 800-624-7767

Date Info Verified: 2013-05-11

Related Items: Products by this manufacturer

The following information (Health Effects, Handling/Disposal, and Ingredients) is taken from the product label and/or the Material Safety Data Sheet (MSDS) prepared by the manufacturer. The National Library of Medicine does not test products nor does it evaluate information from the product label or the MSDS. (**What is an MSDS?**)

Health Effects

Enter text or highlight term... Search TOXNET

Warnings: Danger. Contains toluene, hexane. Extremely flammable. Keep away from heat, sparks, flame. Vapors may ignite explosively Do not smoke. Extinguish al flames, burners, stoves, heaters and pilot lights disconnect all electric motors and appliances before use and until all vapors are gone. Prevent build-up of vapors by opening all windows and doors to achieve cross ventilation. Empty container may contain explosive vapors or harmful residues-Do not cut or weld on or near empty container. Observe all label warnings until container is commercially cleaned or reconditioned. May cause eye, skin and respiratory irritation. May cause central nervous system effects including dizziness, headache or nausea. Avoid contact with skin, eyes and clothing. Avoid breathing vapors. Contains n-Hexane which can cause peripheral polyneuropathy and central nervous damage. Notice: Reports have associated repeated and prolonged over exposure to solvents with permanent brain, nervous system, liver and kidney damage or may cause cardiac arrhythmia. Intentional misuse by deliberately concentrating or inhaling contents may be harmful or fatal. First Aid: In case of contact, flood the affected areas thoroughly with plenty of water for at least 15 minutes. If irritation persists, seek medical attention. Remove and wash contaminated clothing. If inhalation effects occur, remove to fresh air. If not breathing, administer artificial respiration. Seek medical attention immediately. IF swallowed, SEEK IMMEDIATE MEDICAL ATTENTION. Should vomiting occur, be sure to keep victim's head below hips to avoid aspiration of vomitus into the lungs. Refer to Material Safety Data Sheet for further information. For medical emergencies call 1-800-424-9300. Proposition 65: This product contains toluene, known to the state of California to cause birth defects or other reproductive harm.

Acute Health Effects: From MSDS
ROUTES OF ENTRY:
ENTRY THROUGH... Inhalation and skin most likely

EFFECTS OF OVEREXPOSURE
Eyes: Can cause irritation, redness, tearing and blurred vision.
Skin: Prolonged or repeated contact can cause moderate irritation, drying of the skin, and dermatitis.
Inhalation: Excessive inhalation of vapors can cause respiratory irritation, headache, drowsiness and fatigue. High concentrations of vapors are anesthetic and may cause central nervous system effects such as dizziness.
Ingestion: Can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic Health Effects: From MSDS
Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain, nervous system, liver or kidney damage or may cause cardiac arrhythmia. INTENTIONAL misuse of this product by deliberately inhaling its vapors may be harmful or fatal. N-Hexane can cause peripheral neuropathy (arm and leg damage) and central nervous system damage. Prolonged and repeated exposure has been suggested as a cause of the following effects in lab animals:
liver and reproductive abnormalities, kidney, spleen, lung or eye damage
May aggravate pre-existing disorders of these organs in humans. May be harmful if absorbed through skin. Repeated overexposure to Toluene may cause liver damage. Toluene has been found to cause Kidney, Lung and Spleen damage in laboratory animals.

Carcinogenicity: From MSDS
CARCINOGENICITY...
NTP? N/E | IARC Monographs? N/E | OHSA? NO

First Aid: From MSDS
Eyes: Flush eyes gently with water for at least 15 minutes lifting eyelids occasionally; get prompt medical attention
Skin: Wash thoroughly with soap and water; apply a mild skin cream. Remove contaminated clothing.
Inhalation: Move affected person to fresh air; if breathing is difficult, administer oxygen; if breathing has stopped, give artificial respiration. Get medical attention.
Ingestion: DO NOT INDUCE VOMITING! Get immediate medical attention.

Health Rating: N

Flammability Rating: N

Reactivity Rating: N

HMIS Rating Scale: 0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe; N = No information provided by manufacturer; * = Chronic Health Hazard

MSDS Date: 2002-09-09

Handling/Disposal

Handling: From MSDS
Keep away from heat, spark and flame. Keep out of reach of children.
Keep container closed while not in use. Do not cut or burn receptacles that have contained a solvent based product. Do not reuse this container. Use only in a well ventilated area.

Disposal: From MSDS
Dispose of following local, state, and federal regulations.

Ingredients from MSDS/Label

Chemical	CAS No / Unique ID	Percent
Ethanol/SD Alcohol 40	000064-17-5	<5
Toluene	000108-88-3	5.0-10.0
Hexane	000110-54-3	5.0-10.0

Solvent naphtha, petroleum, light aliphatic	064742-89-8	10.0-15.0
Non-hazardous ingredient(s)	999999-57-5	

Note: Brand names are trademarks of their respective holders.
Information is extracted from Consumer Product Information Database ©2001-2013 by DeLima Associates.
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Keson Industries, Inc. 810 Commerce Street Aurora, IL 60504
Date Prepared: January 1, 2014

MATERIAL SAFETY DATA SHEET

SECTION 1

Product Name: MARKING CHALK WHITE
For Information Call: 1-800-345-3766

SECTION II - Hazardous Ingredients of Mixture

Principal Component (s)	CAS #	OSHA PEL	ACGIH, TLV
Quartz-Crystalline Silica	14808-60-7	0.1 mg/m^3	0.1 mg/m^3
Calcium Carbonate	471-34-1	15 mg/m^3	10 mg/m^3

SECTION III-Physical Data

Boiling Point: N/A
Vapor Pressure: N/A
% Volatile by weight: N/A
Appearance: Odorless White Powder

Specific Gravity (H2O=1) 2.6
Solubility in Water: Negligible
Vapor Pressure: N/A
pH 8.6-8.8 (Saturated Solution)

SECTION IV- Fire and Explosion Data

Flash Point: Non-Flammable
Extinguishing Media: Non-Flammable
Special Firefighting Procedures: NIOSH Approved respirator and protective clothing should be worn. Use water spray to cool equipment and containers.
Unusual Fire Explosion Hazards: None known.

SECTION V-Health Hazard Data

Routes of Entry: Skin-Yes, Inhalation-Yes, Ingestion-Yes, Eyes -Yes.

Carcinogenicity -Calcium Carbonate contains crystalline silica at levels between 0.01-2%. There is some evidence that this material may be carcinogenic. Limit exposure to the lowest limit possible.

Effects of Overexposure:
Eye Contact- Irritating to eyes
Skin Contact- None noted
Inhalation- May cause irritation to the nose, throat and respiratory tract.
Ingestion- Harmful or fatal if swallowed.

SECTION V-Health Hazard Data (cont'd)

Emergency First Aid Procedures:
Eye Contact: Flush with warm water, lifting the eyelids periodically for 15 minutes. Consult a physician if condition persists.
Skin Contact: Wash affected area with warm soapy water. If irritation occurs, consult a physician.
Ingestion: Call a physician immediately.
Inhalation: Remove victim from dust area to fresh air and seek medical attention. Give artificial respiration if not breathing. Call a physician.

The information herein is given in good faith
but no warranty, expressed or implied, is made.

SECTION VI-Reactivity Data

Stability: Stable Conditions to avoid: None known.

Incompatibility (materials to avoid): Acids, aluminum, fluorine, magnesium, alum or ammonium salts
Hazardous Decomposition Products: Combustion will produce toxic oxides of carbon, calcium oxide.
Hazardous Polymerization: Will not occur.

SECTION VII-Spill or Leak Procedures

Vacuum or scoop material into approved containers for reclamation or disposal. If excessive dust is generated, wear NIOSH approved respirator for mineral dust.

SECTION VIII-Special Protection Information

Respiratory Protection:	An approved NIOSH respirator should be worn when TWA limits are exceeded.
Ventilation:	Use local ventilation to keep dust levels below recommended exposure limits. If exposure limits are exceeded, a NIOSH approved respirator for mineral dust should be worn.
Protective Clothing:	Employees must wear gloves.
Eye Protection:	Chemical safety goggles or safety glasses with splash guards.
Other Protective equipment:	Eye bath and safety shower should be available.

SECTION IX- Special Precautions

Precautions to be taken in handling and storage: Do not store near acids. Follow normal good housekeeping procedures.
Other Precautions: Wash hands thoroughly after handling. Wash contaminated clothing before reuse.

SECTION X- Regulatory Status

TSCA Inventory Status:	This material is a mixture, the ingredients of which are on TSCA inventory.
RCRA:	This material, when disposed of, is not specifically listed as a hazardous waste according to federal regulations unless it meets the USEPA definitions for being toxic, corrosive, ignitable or reactive, or it is mixed with or comes in contact with a listed hazardous waste. Consult local, state and federal regulations.
	California Proposition 65: See Section XI

SECTION XI-Other Regulatory Information

CHEMICAL NAME/ CAS NUMBER	CONCENTRATION	STATE CODE
Arsenic/7440-38-2	<100ppm*	CA, MA
Cadmium/7440-43-9	<5ppm*	CA, MA
Mercury/7439-97-6	<1ppm*	CA
Nickel/7440-02-0	<400ppm*	CA, MA
Lead/7439-92-1	<100ppm*	CA

*Content of these materials may vary from batch to batch.

CA = California Proposition 65
MA = Massachusetts Hazardous Substance List

HMIS CODE:		**NFPA CODE**:	
Health	1	Health	1
Flammability	0	Flammability	0
Reactivity	0	Reactivity	0

The information herein is given in good faith
but no warranty, expressed or implied, is made.

T1120 MATERIAL SAFETY DATA SHEET

01302-1005
-1016

MARCH 16, 1994 rcvd. 8/2

RUPERT GIBBON & SPIDER, INC
P.O. Box 425
Healdsburg, California 95448

SODA ASH

ORDER NO: 219535814
PROD NO: 04621203

VAN WATERS & ROGERS INC. 1600 NORTON BLDG. SEATTLE, WA 98104-1564

----------EMERGENCY ASSISTANCE----------

FOR EMERGENCY ASSISTANCE INVOLVING CHEMICALS CALL CHEMTREC (800) 424-7300.

----------FOR PRODUCT AND SALES INFORMATION----------

CONTACT YOUR LOCAL VAN WATERS & ROGERS BRANCH OFFICE

----------PRODUCT IDENTIFICATION----------

PRODUCT NAME: SODA ASH CAS NO.: 497-19-8
COMMON NAMES/SYNONYMS: SODIUM CARBONATE, ANHYDROUS VW&R CODE: T1120

FORMULA: NA2 CO3
HAZARD RATING (MANUFACTURER)
HEALTH: 2
FIRE: 0
REACTIVITY: 0
SPECIAL: NONE

DATE ISSUED: 11/87
SUPERCEDES: NONE
HAZARD RATING SCALE:
0=MINIMAL 3=SERIOUS
1=SLIGHT 4=SEVERE
2=MODERATE

V-1895

----------HAZARDOUS INGREDIENTS----------

COMPONENT	CAS NO.	%	EXPOSURE LIMITS, PPM OSHA PEL	ACGIH TLV	OTHER LIMIT	HAZARD
SODIUM CARBONATE	(497-19-8)	777	NONE	NONE	NONE	IRRITANT

----------PHYSICAL PROPERTIES----------

BOILING POINT, DEG F: N/A VAPOR PRESSURE, MM HG/20 DEG C: N/A
MELTING POINT, DEG F: 1564 VAPOR DENSITY (AIR=1): N/A
SPECIFIC GRAVITY (WATER=1): 2.533 WATER SOLUBILITY, %: 30
APPEARANCE AND ODOR: EVAPORATION RATE (BUTYL ACETATE=1): N/A
ODORLESS, WHITE POWDER OR GRANULAR SOLID OR CRYSTAL.

----------FIRST AID MEASURES----------

IF INHALED: REMOVE TO FRESH AIR. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING. GET IMMEDIATE MEDICAL ATTENTION.

IN CASE OF EYE CONTACT: IMMEDIATELY FLUSH EYES WITH LOTS OF RUNNING WATER FOR 15 MINUTES, LIFTING THE UPPER AND LOWER EYELIDS OCCASIONALLY. GET IMMEDIATE MEDICAL ATTENTION

IN CASE OF SKIN CONTACT: IMMEDIATELY WASH SKIN WITH LOTS OF SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND SHOES; WASH BEFORE REUSE. GET MEDICAL ATTENTION IF IRRITATION PERSISTS AFTER WASHING.

IF SWALLOWED: DO NOT INDUCE VOMITING. IF CONSCIOUS, GIVE LOTS OF WATER OR MILK. GET IMMEDIATE MEDICAL ATTENTION. DO NOT GIVE ANYTHING BY

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MOUTH TO A UNCONSCIOUS OR CONVULSING PERSON.

HEALTH HAZARD INFORMATION

PRIMARY ROUTES OF EXPOSURE: INHALATION, SKIN OR EYE CONTACT.

SIGNS AND SYMPTOMS OF EXPOSURE

INHALATION: BREATHING DUST MAY IRRITATE THE NOSE AND THROAT AND CAUSE COUGHING AND CHEST DISCOMFORT EXCESSIVE CONTACT CAN CAUSE DAMAGE TO THE NASAL SEPTUM.

EYE CONTACT: DUSTS WILL IRRITATE THE EYES AND PROLONGED CONTACT MAY DAMAGE THE EYES.

SKIN CONTACT: PROLONGED OR REPEATED CONTACT WITH THE DUST MAY IRRITATE THE SKIN WITH BLISTERING AND REDNESS. SOLUTIONS MAY CAUSE SEVERE IRRITATION OR BURNS.

SWALLOWED: SWALLOWING LARGE QUANTITIES MAY CAUSE NAUSEA, VOMITING, ABDOMINAL PAIN, DIARRHEA AND COLLAPSE.

CHRONIC EFFECTS OF EXPOSURE: MAY CAUSE SENSITIZATION.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: NONE REPORTED.

TOXICITY DATA

ORAL: RATS LD50 = 4 G/KG

DERMAL: RABBITS 500 MG/24 HR, MODERATE IRRITATION

INHALATION: NO DATA FOUND.

CARCINOGENICITY: THIS MATERIAL IS NOT CONSIDERED TO BE A CARCINOGEN BY THE NATIONAL TOXICOLOGY PROGRAM, THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER, OR THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

OTHER DATA: NONE

PERSONAL PROTECTION

VENTILATION: LOCAL MECHANICAL EXHAUST VENTILATION CAPABLE OF MAINTAINING DUST EMISSIONS AT THE POINT OF USE BELOW THE PEL.

RESPIRATORY PROTECTION: IF USE CONDITIONS GENERATE DUSTS, WEAR A NIOSH-APPROVED RESPIRATOR APPROPRIATE FOR THOSE EMISSION LEVELS. APPROPRIATE RESPIRATORS MAY BE A FULL FACEPIECE OR A HALF MASK AIR-PURIFYING CARTRIDGE RESPIRATOR WITH PARTICULATE FILTERS, A SELF-CONTAINED BREATHING APPARATUS IN THE PRESSURE DEMAND MODE, OR A SUPPLIED-AIR RESPIRATOR.

EYE PROTECTION: CHEMICAL GOGGLES AND FULL FACE SHIELD. IT IS GENERALLY RECOGNIZED THAT CONTACT LENSES SHOULD NOT BE WORN WHEN WORKING WITH CHEMICALS BECAUSE CONTACT LENSES MAY CONTRIBUTE TO THE SEVERITY OF AN EYE INJURY.

PROTECTIVE CLOTHING: LONG-SLEEVED SHIRT, TROUSERS, SAFETY SHOES, RUBBER GLOVES, AND RUBBER APRON.

OTHER PROTECTIVE MEASURES: AN EYEWASH AND SAFETY SHOWER SHOULD BE NEARBY AND READY FOR USE.

FIRE AND EXPLOSION INFORMATION

FLASH POINT, DEG F: N/A FLAMMABLE LIMITS IN AIR, %

METHOD USED: N/A LOWER: N/A UPPER: N/A

EXTINGUISHING MEDIA: USE WATER SPRAY, DRY CHEMICAL, CO2, OR ALCOHOL FOAM.

SPECIAL FIRE FIGHTING PROCEDURES: FIRE FIGHTERS SHOULD WEAR SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING. USE WATER SPRAY TO COOL NEARBY CONTAINERS AND STRUCTURES EXPOSED TO FIRE.

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UNUSUAL FIRE AND EXPLOSION HAZARDS: EXTINGUISH ALL NEARBY SOURCES OF IGNITION.

----------HAZARDOUS REACTIVITY----------

STABILITY: STABLE POLYMERIZATION: WILL NOT OCCUR
CONDITIONS TO AVOID: OPEN FLAMES, WELDING ARCS, OR OTHER HIGH TEMPERATURE SOURCES WHICH MAY INDUCE THERMAL DECOMPOSITION.

MATERIALS TO AVOID: ACIDS.

HAZARDOUS DECOMPOSITION PRODUCTS: MAY LIBERATE CARBON MONOXIDE, CARBON DIOXIDE OR OXIDES OF SODIUM.

----------SPILL, LEAK, AND DISPOSAL PROCEDURES----------

ACTION TO TAKE FOR SPILLS OR LEAKS: WEAR PROTECTIVE EQUIPMENT INCLUDING RUBBER BOOTS, RUBBER GLOVES, RUBBER APRON, AND A SELF-CONTAINED BREATHING APPARATUS IN THE PRESSURE DEMAND MODE OR A SUPPLIED-AIR RESPIRATOR. IF THE SPILL OR LEAK IS SMALL, A FULL FACEPIECE AIR-PURIFYING CARTRIDGE RESPIRATOR EQUIPPED WITH PARTICULATE FILTERS MAY BE SATISFACTORY. IN ANY EVENT, ALWAYS WEAR EYE PROTECTION. FOR SMALL SPILLS, SWEEP UP AND DISPOSE OF IN DOT-APPROVED WASTE CONTAINERS. FOR LARGE SPILLS, SHOVEL INTO DOT-APPROVED WASTE CONTAINERS. KEEP OUT OF SEWERS, STORM DRAINS, SURFACE WATERS, AND SOIL.
COMPLY WITH ALL APPLICABLE GOVERNMENTAL REGULATIONS ON SPILL REPORTING, AND HANDLING AND DISPOSAL OF WASTE.

DISPOSAL METHODS: DISPOSE OF CONTAMINATED PRODUCT AND MATERIALS USED IN CLEANING UP SPILLS OR LEAKS IN A MANNER APPROVED FOR THIS MATERIAL. CONSULT APPROPRIATE FEDERAL, STATE AND LOCAL REGULATORY AGENCIES TO ASCERTAIN PROPER DISPOSAL PROCEDURES.
NOTE: EMPTY CONTAINERS CAN HAVE RESIDUES, GASES AND MISTS AND ARE SUBJECT TO PROPER WASTE DISPOSAL, AS ABOVE.

----------SPECIAL PRECAUTIONS----------

STORAGE AND HANDLING PRECAUTIONS: STORE IN A COOL, DRY, WELL-VENTILATED PLACE. STORE AWAY FROM ALL OTHER CHEMICALS AND POTENTIAL SOURCES OF CONTAMINATION. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. DO NOT USE PRESSURE TO EMPTY CONTAINER. WASH THOROUGHLY AFTER HANDLING. DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING.

REPAIR AND MAINTENANCE PRECAUTIONS: NONE.

OTHER PRECAUTIONS: CONTAINERS, EVEN THOSE THAT HAVE BEEN EMPTIED, WILL RETAIN PRODUCT RESIDUE AND VAPORS. ALWAYS OBEY HAZARD WARNINGS AND HANDLE EMPTY CONTAINERS AS IF THEY WERE FULL.

----------FOR ADDITIONAL INFORMATION----------

CONTACT DOUGLAS EISNER, TECHNICAL DIRECTOR, VAN WATERS & ROGERS INC.
DURING BUSINESS HOURS, PACIFIC TIME (206)447-5911

----------NOTICE----------

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MATERIAL SAFETY DATA SHEET

RELATE TO ITS USE IN COMBINATION WITH ANY OTHER MATERIAL OR IN ANY OTHER PROCESS.

**** E N D O F M S D S ****

Material Safety Data Sheet
May be used to comply with
OSHA's Hazard Communication Standard,
29 CFR 1910.1200. Standard must be
consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY *(As Used on Label and List)*
Acoustical Ceiling Tile Restorer/White

Note: *Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.*

Section I

Manufacturer's Name ProCoat Products, Inc.	Emergency Telephone Number (781) 767-2270
Address (Number, Street, City, State, and ZIP Code) 260 Centre Street, Suite D	Telephone Number for Information (781) 767-2270
Holbrook, Massachusetts 02343	Date Prepared March 4, 1999
U.S.A.	Signature of Preparer (optional)

Section II – Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))		OSHA PEL	ACGIH TLV	Other Limits Recommended	VOC % (optional
Trichloroethylene	79-01-6	50 ppm	50 ppm		
Acetone	67-64-1	750 ppm	750 ppm		
Paraffinic, Naphthenic Solvent	64742-47-8	100 ppm	350 mg/m3		
Isopropanol	67-63-0	400 ppm	400 ppm		
Propane	74-98-6	1000 ppm	1000 ppm		
Isobutane	75-28-5	Not Est.	800 ppm		
					Total: 57.0

Regulatory Information: US Federal Regulations – TSCA (Toxic Substances Control Act)
Status. All ingredients are listed. CERCLA RO – 40 CFR 302.4: Not applicable
Aerosol quantities. SARA 313 Ingredients: Percent
Trichloroethylene 25 - 35
Acetone 10 - 20

Section III – Physical/Chemical Characteristics

Boiling Point	Not Est.	Specific Gravity (H_2O = 1) @ 25 C.	1.123
Vapor Pressure (mm Hg.) (psig)	55	Melting Point	N/A
Vapor Density (AIR = 1)	>1	Evaporation Rate (Butyl Acetate = 1)	< 1

Solubility in Water
Insoluble pH (@ 25 C.) N/A

Appearance and Odor
White - Sweet Etheral Odor

Section IV – Fire and Explosion Hazard Data

Flash Point (Method Used) (TCC): Not Established Flame Protection: More than 18"	Flammable Limits % by volume	LEL Not Est.	UEL Not Est.

Extinguishing Media
Co2, Standard Foam, Dry Chemical, Halon

Special Fire Fighting Procedures
Wear self-contained breathing apparatus.

Unusual Fire and Explosion Hazards Hazardous Products of Combustion: May form carbondioxide, carbon monoxide, phosgene, hydrogen chloride, chlorine. Exposure to temperature above 120 degrees F.

Autoignition Temperature: Not Established

(Reproduce locally) NFPA Rating: Health 2 Flammability 3 Reactivity 0 OSHA 174, Sept. 1985
HMIS Rating: Health 2 Flammability 3 Reactivity 0

Section V – Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	

Incompatibility (Materials to Avoid) Contact with strong oxidizing agents.

Hazardous Decomposition or Byproducts Will not decompose

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	

Section VI – Health Hazard Data

Route(s) of Entry:	Inhalation?	Skin?	Ingestion?	Eyes?
	Yes	Yes	Yes	Yes

Health Hazards (Acute and Chronic)

Target Organs: Heart, Liver, Skin, Eyes and Central Nervous System.

Primary Route(s) of entry: Ingestion, Inhalation, Skin Contact, Eye Contact.

Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
ACGIH: Possible	Not listed	Possible	Yes

Potential Health Effects: Non expected.

Signs and Symptoms of Exposure May cause pain, irritation, redness, slight corneal injury.
Skin: May cause drying or flaking, irritation, burning sensation, swallowing: May cause gastrointestinal disturbances, nausea, vomiting, diarrhea. Inhalation: Over exposure may cause nausea, dizziness, headache and upper respiratory discomfort, irregular heart beat.

Medical Conditions Generally Aggravated by Exposure Skin sensitivity, chemical allergies, heart condition.

Emergency and First Aid Procedures Eyes: Flush with water for 15 min. If irritation persists, seek medical attention. Skin: Wash with soap and water. If irritation persists, seek medical attention.

Swallowing: *Do not induce vomiting in order to avoid aspiration into lungs. Seek medical attention immediately. Inhalation: Remove to fresh air. *If lavage is performed, suggest endotracheal and/or esphageal control. Do not administer sympathomimetic drugs unless absolutely necessary.

Section VII – Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled

Small Spill: Absorb liquid on vermiculite, floor absorbent or other absorbent material.
Large Spill: Evacuate area. Remove all sources of ignition. Contain liquid. Prevent run-off to sewer.

Waste Disposal Method

Dispose of spilled material in accordance with all applicable local, state and federal regulations.

Precautions to be Taken in Handling and Storage Do not store where temperatures exceed 120 degrees F. Keep out of reach of children. Wash hands before eating or smoking after using.

Other Precautions

Transport: DOT Information –49 CFR 172.101. DOT Description: Consumer Commodity DOT Hazard Class: ORM-D Container/Mode: 16oz. Aerosol Can UN ID Number: 1950

Section VIII – Control Measures

Respiratory Protection (Specify Type)

Not required.

Ventilation	Local Exhaust	Special
	Recommended	None
	Mechanical (General) General ventilation recommended to control the level of vapors.	Other Rerspiratory Protection: Not required

Protective Gloves	Eye Protection	Other
For short usage none required Safety goggles.	For short usage none required	

Other Protective Clothing or Equipment

None.

Work/Hygienic Practices

*U.S.G.P.O.: 1986-491-529/45775

SAFETY DATA SHEET

1. Identification

Product identifier PROFESSIONAL PRIDE DOUBLE STEAL

Other means of identification

- **SDS number** 567N-98D
- **Product code** HIL05787

Recommended use Floor Finish

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Manufacturer

Company name HILLYARD, INC

Address 40 Ash Circle
Warminster, PA 18974

Contact person Regulatory Affairs

Telephone number (816) 233-1321 (Ext. 8285)

Fax (816) 383-8485

E-mail regulatoryaffairs@hillyard.com

Emergency telephone # (800) 424-9300
(Only in the event of chemical emergency involving a spill, leak, fire, exposure, or accident involving chemicals.)

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Hazardous to the aquatic environment, acute hazard Category 3

OSHA defined hazards Not classified.

Label elements

- **Hazard symbol** None.
- **Signal word** None.
- **Hazard statement** Harmful to aquatic life.
- **Precautionary statement**
  - **Prevention** Avoid release to the environment.
  - **Response** Wash hands after handling.
  - **Storage** Store away from incompatible materials.
  - **Disposal** Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law in compliance with applicable federal, state and local requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
2-(2-ethoxyethoxy)ethanol		111-90-0	3 - < 5
Dipropylene glycol monomethyl ether		34590-94-8	3 - < 5

Chemical name	Common name and synonyms	CAS number	%
Tributoxyethyl Phosphate		78-51-3	1 - < 3
Other components below reportable levels			80 - < 90

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses.

Ingestion Drink water as a precaution. Get medical attention if any discomfort continues.

Most important symptoms/effects, acute and delayed Direct contact with eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed Treat symptomatically.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. Follow precautions for safe handling described in this safety data sheet. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Prevent product from entering drains. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

7. Handling and storage

Precautions for safe handling Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Dipropylene glycol monomethyl ether (CAS 34590-94-8)	PEL	600 mg/m3
		100 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Dipropylene glycol monomethyl ether (CAS 34590-94-8)	STEL	150 ppm
	TWA	100 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Dipropylene glycol monomethyl ether (CAS 34590-94-8)	STEL	900 mg/m3
		150 ppm
	TWA	600 mg/m3
		100 ppm

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
2-(2-ethoxyethoxy)ethanol (CAS 111-90-0)	TWA	140 mg/m3
		25 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines

US - California OELs: Skin designation

Dipropylene glycol monomethyl ether (CAS 34590-94-8) Can be absorbed through the skin.

US - Tennessee OELs: Skin designation

Dipropylene glycol monomethyl ether (CAS 34590-94-8) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Dipropylene glycol monomethyl ether (CAS 34590-94-8) Can be absorbed through the skin.

US NIOSH Pocket Guide to Chemical Hazards: Skin designation

Dipropylene glycol monomethyl ether (CAS 34590-94-8) Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Dipropylene glycol monomethyl ether (CAS 34590-94-8) Can be absorbed through the skin.

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Not normally needed.

Skin protection

Hand protection Not normally needed.

Other Not normally needed.

Respiratory protection No personal respiratory protective equipment normally required.

Thermal hazards Not applicable.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance White emulsion

Physical state	Liquid.
Form	Liquid.
Color	White
Odor	non-objectionable odor
Odor threshold	Not available
pH	8 - 9
Melting point/freezing point	Not applicable / Not available
Initial boiling point and boiling range	> 200 °F (> 93.33 °C)
Flash point	> 220.0 °F (> 104.4 °C) Tag Closed Cup
Evaporation rate	< 1 (ethyl ether = 1)
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	17.2 mm Hg
Vapor density	1.5 AIR=1
Relative density	1.04 at 77°F
Solubility(ies)	
Solubility (water)	Dispersable
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Other information	
Density	8.64 lb/gal

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
Skin contact	May be irritating to the skin.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity

Product	Species	Test Results
PROFESSIONAL PRIDE DOUBLE STEAL		
Acute		
Dermal		
LD50	Rabbit	32039.7773 mg/kg estimated
Oral		
LD50	Guinea pig	50167.2227 mg/kg estimated
	Mouse	218.6046 g/kg estimated
	Rat	38563.332 mg/kg estimated

Components	Species	Test Results
2-(2-ethoxyethoxy)ethanol (CAS 111-90-0)		
Acute		
Dermal		
LD50	Rabbit	8476 mg/kg
	Rat	6000 mg/kg
Oral		
LD50	Mouse	6.58 g/kg
	Rat	1920 mg/kg
Dipropylene glycol monomethyl ether (CAS 34590-94-8)		
Acute		
Dermal		
LD50	Rabbit	9.5 g/kg
Oral		
LD50	Rat	5.35 g/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Harmful to aquatic life.

Product		Species	Test Results
PROFESSIONAL PRIDE DOUBLE STEAL			
Aquatic			
Crustacea	EC50	Daphnia	121.7373 mg/l, 48 hours estimated
Fish	LC50	Fish	348.8947 mg/l, 96 hours estimated

Components		Species	Test Results
2-(2-ethoxyethoxy)ethanol (CAS 111-90-0)			
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	> 10000 mg/l, 96 hours
Tributoxyethyl Phosphate (CAS 78-51-3)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	10.4 - 12 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

2-(2-ethoxyethoxy)ethanol	-0.54
Tributoxyethyl Phosphate	3.75

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations. Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

15. Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Dipropylene glycol monomethyl ether (CAS 34590-94-8)

US. New Jersey Worker and Community Right-to-Know Act

Dipropylene glycol monomethyl ether (CAS 34590-94-8)

US. Pennsylvania Worker and Community Right-to-Know Law

Dipropylene glycol monomethyl ether (CAS 34590-94-8)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	01-22-2015
Version #	01
HMIS® ratings	Health: 0 Flammability: 0 Physical hazard: 0
Disclaimer	No representations or warranties, either express or implied, of merchantability, fitness for a particular purpose, or of any nature are made with respect to the product(s) or information contained in this material safety data sheet. The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate. The buyer or user assumes all risks associated with the use, misuse or disposal of this product. The buyer or user is responsible to comply with all federal, state or local regulations concerning the use, misuse or disposal of these products.

PRODUCT DATA SHEET

Tile, Stone & Grout Sealer

Water Base

MIRACLE Sealants Company

www.miraclesealants.com

Water & Stain Protection For

- Grout
- Quarry Tile
- Ceramic Tile
- Glazed Tile
- Granite
- Marble
- Limestone
- Terrazzo
- Saltillo Tile
- Slate
- Flagstone
- Concrete
- Brick
- Travertine
- Porcelain Tile

Uses

- Kitchens
- Bathrooms
- Showers
- Health
- Driveways
- Patios
- Garages
- Facilities

Special Features

- Easy-to-Use
- Interior & Exterior Use
- Oil Resistant
- Retains Natural Color
- Odorless
- Non Flammable

NO PERFLUOROCTANE SULFONATE (PFOS); NO PERFLUOROCTANOIC ACID (PFOA)

PRODUCT DESCRIPTION

KEEP OUT OF REACH OF CHILDREN. Tile, Stone & Grout Sealer is a unique water base formulation designed for the protection of all surfaces where a water base product is required. **Tile, Stone & Grout Sealer** penetrates into the surface and forms an invisible barrier that is resistant to moisture and stains, while allowing vapor to escape. **Tile, Stone & Grout Sealer** is not a surface coating and will not alter the natural look. **Tile, Stone & Grout Sealer** can be used on interior and exterior applications. **NO (PFOS) or (PFOA)**

Test Data

Independent laboratory tests show **Tile, Stone & Grout Sealer** out performs competitive products. Test results are available upon request for staining.

NOTE: For any questions concerning grout-refer to the grout manufacturers specifications. **Tile, Stone & Grout Sealer** will not stop acid etching.

Slip Resistance

Tile, Stone & Grout Sealer increases the static coefficient of friction on all surfaces. **Tile, Stone & Grout Sealer** has been used successfully for compliance with the American Disability Act's recommendations for slip resistance (ASTM C 1028-89) on polished & honed surfaces.

Sample Testing

Due to the differences of each material, several inconspicuous test patches should be completed to assure maximum performance. **User must determine suitability of the product for their intended use.**

Protect Neighboring Surfaces

Always protect neighboring surfaces including wood, carpet, metal, landscaping and other non masonry surfaces.

NEW INSTALLATIONS - APPLICATION INSTRUCTIONS

Read entire label and PDS/MSDS before using. This product should be used directly from container and is not under any circumstances to be thinned or diluted with anything before use. Sealing As a Grout Release

Apply **Tile, Stone & Grout Sealer** to all surfaces prior to grouting. This step will allow quick and easy cleanup after grouting. Grout can stain many surfaces if this procedure is not used prior to the grouting process. Apply **Tile, Stone & Grout Sealer** using a **Mira Brush** or a clean towel. Apply enough to wet the surface. Be careful not to saturate the open grout joints. Allow **Tile, Stone & Grout Sealer** to stand for approximately 3 - 5 minutes for maximum penetration. All excess must be removed at this time by buffing surface with a clean dry towel. This is very important on polished, glazed surfaces, and porcelain surfaces. Allow **Tile, Stone & Grout Sealer** to cure for 6 - 12 hours before continuing with the grouting procedure.

After Grouting: Once grouted, make sure that all grout residue is removed from the surface with a clean sponge and water. Allow grout to dry at least 24 - 72 hours. If grout clean up is not performed effectively, an additional cleaning may be necessary to remove remaining grout residue or haze. For this procedure use **Phosphoric Acid Cleaner , HDAC (Heavy Duty Acidic Cleaner)** or **Epoxy Grout Film Remover** as directed.

Grout Sealing

Once the area has completely dried, proceed with the sealing of the grout for water and stain resistance. Apply **Tile, Stone & Grout Sealer** to all grout with a thin paintbrush. Any excess sealer that gets on the surface should be wiped off with a clean towel before it dries.On larger jobs, grout can be sealed by retreating the entire area including the tile or stone surface a second time. Be careful not to allow sealer to puddle or dry on presealed surfaces.

Existing Installations - Surface Preparations

Surface must be dry and free of contaminants, including previously applied sealers, dirt, lime & hard water deposits, efflorescence, rust & other heavy dirt and grime.

Floor Coating/Wax Removal: To remove existing coatings and/or waxes, use **Mira Strip** or **Finish Sealer Stripper** per the instructions.

Heavy Duty Cleaning: To remove lime and hard water deposits, efflorescence, rust, grease and other heavy dirt and grime use **HDAC (Heavy Duty Acidic Cleaner) or, Phosphoric Acid Cleaner** as directed. For a non-acid deep clean use **Liquid Poultice** as directed.

Light Duty Cleaning: Use **Tile & Stone Cleaner, Porcelain & Ceramic Tile Cleaner, Counter Kleen**, or **Limestone/Travertine Soap** as directed.

Color & Gloss Enhancement

For color and gloss enhancement, use **511 Seal & Enhance**, **Mira Matte** or **High-Gloss Finish Sealer** as directed.

Existing Installations - Application Instructions:

Follow the application instructions previously mentioned, except now, seal the grout and tile or stone surface at the same time. When treating surfaces together, make sure that the recessed grout is saturated with sealer.

Cure Time

Tile, Stone & Grout Sealer will be dry to the touch in 1 - 3 hours and may be put into service. For optimum results the area should be kept dry and free from staining materials for 24 - 72 hours.

Coverage

Coverage will vary depending on the density, porosity, texture, surface absorption, weather, time solution left on surface and application methods. Used as directed, **Tile, Stone & Grout Sealer** will cover between 500 - 1,500 sq.ft. per gallon (45 - 135 square meters per 3.785 liters).

MAINTENANCE

For ongoing maintenance instructions please refer to **Miracle Sealants Care Guide.** Refer to the **Miracle Sealants Product Recommendation Chart** for specific product recommendations.

Storage

Store **Tile, Stone & Grout Sealer** in the original container, properly sealed to avoid contamination and evaporation. Stored at 77° F (25° C), **Tile, Stone & Grout Sealer** will have a shelf life of 12 months. Do not allow to freeze.

Technical Support

For additional technical support, contact Miracle Sealants Company at 1-800-350-1901 or 626-443-6433 ext. 3013

Office Hours

Monday - Friday from 8:30 am - 5:00 pm PT.
1-626-443-6433 or 1-800-350-1901 • Fax: 1-626-443-1435
website: www.miraclesealants.com

Product Damaged During Transportation

If product is damaged during transportation contact Info Trac @ 1-800-535-5053

Warranty

Instructions are a condensed guide and should not be considered complete. In the event of failure, the only obligation of Miracle Sealants Company shall be to replace such products proven to be defective. **Before using, user shall determine the suitability of the product for their intended use User assumes all risks and liability whatsoever in connection therein.** Neither seller nor manufacturer shall be liable for any injury or inability to use this product.

Caution

Warning: Detectable amounts of chemicals known to the State of California to cause cancer, birth defects or other reproductive harm may be found in this product. Tile, Stone & Grout Sealer may cause irritation of eyes and skin. Avoid contact and prolonged breathing. Use in a well ventilated area. Good ventilation means that fresh air is flowing in such a way as to feel a slight breeze. Open windows and use fans to circulate air. Continue to ventilate until vapors are eliminated. Exposure to high vapor concentration must be avoided. Inhaling the vapors can be harmful. Keep away from heat and open flames. Avoid prolonged contact with skin. Chemical resistant gloves should be worn at all times. Keep small children and pets out of area until product or surfaces has thoroughly dried. **Refer to the MSDS for additional information.**

Additional Products

Miracle Sealants Company offers a complete line of water & stain repellents, sealers, cleaner, polishing compounds, diamond abrasives, machinery and accessories for the tile, stone, concrete, metal, fabric and carpet professional or do-it yourself specialist.

05 - 2012

Safety Data Sheet

Issue Date 01-May-2012 **Revision Date:** 14-Oct-2013 **Version** 1

1. IDENTIFICATION

Product Identifier

Product Name Tile, Stone & Grout Sealer

Other means of identification

SDS # MSC-017

Recommended use of the chemical and restrictions on use

Recommended Use Sealant.

Details of the supplier of the safety data sheet

Supplier Address
Miracle Sealants Company
12318 Lower Azusa Road
Arcadia, CA 91006

Emergency Telephone Number

Company Phone Number 1-626-443-6433 (Phone)
1-626-443-1435 (Fax)

Emergency Telephone (24 hr)
For product spills, leaks or exposures call:
Infotrac 1-800-535-5053 (North America) or 1-352-323-3500 (International)

2. HAZARDS IDENTIFICATION

Appearance Milky white liquid **Physical State** Liquid **Odor** Slight odor

Classification

This chemical does not meet the hazardous criteria set forth by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). However, this Safety Data Sheet (SDS) contains valuable information critical to the safe handling and proper use of this product. This SDS should be retained and available for employees and other users of this product.

Unknown Acute Toxicity
2.5% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
1-Butoxy-2-propanol	5131-66-8	Proprietary

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists: Get medical advice/attention.

Skin Contact Wash off immediately with soap and plenty of water.

Inhalation Remove to fresh air. Artificial respiration and/or oxygen may be necessary. Call a physician.

Ingestion Drink a quart of water. Induce vomiting, but only if victim is fully conscious. Seek medical attention. Never give anything by mouth to an unconscious person.

Most important symptoms and effects

Symptoms May cause mild skin and eye irritation. May cause nausea, vomiting and/or diarrhea if ingested. Gross over-inhalation may cause symptoms such as but not limited to coughing.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically. May also aggravate pre-existing lung disorders.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Water. Dry chemical. Carbon dioxide (CO_2). Foam.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical
Non-combustible. Non-flammable.

Hazardous Combustion Products Carbon monoxide. Carbon dioxide (CO_2). Hydrogen fluoride.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment as required.

Environmental Precautions Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13, Disposal Considerations, for additional information.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Observe precautions from other sections of this data sheet. Collect any spills with absorbent material such as vermiculite, place collected material in a polyethylene line metal container and seal. Clean up residue with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed and store in a cool, dry and well-ventilated place. Protect from sunlight. Protect from freezing. Keep out of the reach of children.

Incompatible Materials None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Splash proof chemical safety goggles.

Skin and Body Protection Protective gloves: Plastic or rubber, chemical resistant
Protective clothing or equipment: Chemical resistant clothing.

Respiratory Protection Ensure adequate ventilation, especially in confined areas. In case of inadequate ventilation wear respiratory protection. Follow respirator protection program requirements (OSHA 1910.134 and ANSI Z88.2).

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Work hygienic practices: Wash hands thoroughly before handling foodstuffs, liquids or tobacco products. Use common sense and care around chemicals. Never mix this product with other chemicals. Consult your supervisor for all other hygienic and safety practices. All practices depend on your specific business. Directions for use normally found on label which will dictate engineering and control measures.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid		
Appearance	Milky white liquid	**Odor**	Slight odor
Color	Milky white	**Odor Threshold**	Not determined

Property	**Values**	**Remarks • Method**
pH	4-6	
Melting Point/Freezing Point	Not determined	
Boiling Point/Boiling Range	100 °C / 212 °F	
Flash Point	None	TOC
Evaporation Rate	< 1	(Ether = 1)
Flammability (Solid, Gas)	Liquid-not applicable	
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	

Vapor Pressure	<1	@ 68°F (20 ° C)
Vapor Density	>1	(Air=1)
Specific Gravity	1.10	(1=Water)
Water Solubility	Soluble in water	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	
VOC Content	VOC<65 g/l (EPA Calculation) VOC<16 g/l (Low Solids Calculation) VOC exempt components: 90% (Water & Solids)	

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions.

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid
Keep out of reach of children.

Incompatible Materials
None known based on information supplied.

Hazardous Decomposition Products
Carbon monoxide. Carbon dioxide (CO2). Hydrogen fluoride.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Avoid contact with eyes. **Skin**

Contact Avoid contact with skin.

Inhalation Avoid breathing vapors or mists.

Ingestion Do not taste or swallow.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	> 90 mL/kg (Rat)	-	-
1-Butoxy-2-propanol 5131-66-8	= 5660 µL/kg (Rat)	= 3100 mg/kg (Rabbit)	-

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical measures of toxicity
Not determined

Unknown Acute Toxicity 2.5% of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION

Ecotoxicity
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence/Degradability
Not determined

Bioaccumulation
Not determined

Mobility
Not determined

Other Adverse Effects
Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT Not regulated

IATA Not regulated

IMDG Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA All ingredients are listed or exempt from listing on Chemical Substance Inventory

Legend:

TSCA *- United States Toxic Substances Control Act Section 8(b) Inventory*

DSL/NDSL *- Canadian Domestic Substances List/Non-Domestic Substances List*

EINECS/ELINCS *- European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*

ENCS *- Japan Existing and New Chemical Substances*

IECSC *- China Inventory of Existing Chemical Substances*

KECL *- Korean Existing and Evaluated Chemical Substances*

PICCS *- Philippines Inventory of Chemicals and Chemical Substances*

US Federal Regulations

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated under applicable state right-to-know regulations

16. OTHER INFORMATION

NFPA	**Health Hazards** 1	**Flammability** 0	**Instability** 0	**Special Hazards** Not determined
HMIS	**Health Hazards** Not determined	**Flammability** Not determined	**Physical Hazards** Not determined	**Personal Protection** Not determined

Issue Date	01-May-2012
Revision Date:	14-Oct-2013
Revision Note	New format

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

MATERIAL SAFETY DATA SHEET

Version: 1.20
06/03/2014

PFC300WHT
ACRYLIC CAULK

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer Name:	**Momentive Performance Materials - Daytona** **703 South Street** **New Smyrna Beach FL 32168**
Revised:	01/09/2013
Prepared by	Product Regulatory Compliance
CHEMTREC	1-800-424-9300
MSDS Contact	1-888-443-9466
Information	4information@momentive.com
Chemical Family/Use:	Sealant
Formula:	Mixture

HMIS

Health:	1	Flammability:	0	Reactivity:	0

NFPA

Health:	1	Flammability:	0	Reactivity:	0

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING! Harmful if inhaled, absorbed through skin, or swallowed. May cause skin, eye, and respiratory tract irritation. Do not breathe vapors.

Form: Solid **Form:** White **Odor:** Ammonia.

POTENTIAL HEALTH EFFECTS

INGESTION

Harmful if swallowed. Irritation of the mouth, throat, and stomach. May cause reproductive effects based on results of animal studies.

SKIN

May be absorbed through the skin and contribute to the symptoms listed under "Ingestion".

INHALATION

May cause irritation to the mucous membranes and upper respiratory tract. High concentrations of vapors may irritate respiratory system and lead to headache, fatigue, nausea and vomiting. Avoid inhalation of vapors and spray mists.

EYES

Contact can cause severe irritation and conjunctivitis (redness and swelling).

MEDICAL CONDITIONS AGGRAVATED

Persons with pre-existing respiratory tract, skin, lung (such as asthma), and kidney disorders may be aggravated by exposure to this product.

SUBCHRONIC (TARGET ORGAN)

Respiratory System; Kidney

CHRONIC EFFECTS / CARCINOGENICITY

This product contains stoddard solvent or mineral spirits. Chronic and repeated overexposure may result in adverse liver and kidney effects, bone marrow hyperplasia, and intracerebral hemorrhage.

ROUTES OF EXPOSURE

Dermal; Eye

3. COMPOSITION/INFORMATION ON INGREDIENTS

PRODUCT COMPOSITION	CAS-No.	WGT. %
A. HAZARDOUS		
Butyl benzyl phthalate	85-68-7	5 - 10 %
DISTILLATES, PETROLEUM,HYDROTREATED	64742-47-8	0.1 - 1 %
B. NON-HAZARDOUS		
CALCIUM CARBONATE	1317-65-3	30 - 60 %
Water	7732-18-5	10 - 30 %
Vendor Trade Secret Acrylic polymer	-	10 - 30 %
2-Propenoic acid, Butyl ester,-Polymer with Ethenyl Acetate	25067-01-0	1 - 5 %
QUARTZ	14808-60-7	0.1 - 1 %

4. FIRST AID MEASURES

INGESTION

Do NOT induce vomiting. Get medical attention immediately. Do not give victim anything to drink if

he is unconscious.

SKIN

Flush skin with large amounts of water for at least 15 minutes until no evidence of chemical remains. Wash with soap and water.

INHALATION

Move to fresh air.

EYES

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

NOTE TO PHYSICIAN

Treatment is symptomatic and supportive.

5. FIRE-FIGHTING MEASURES

FLASH POINT:	> 93.3 °C; 200 °F
METHOD	Estimated
IGNITION TEMPERATURE:	Not applicable
FLAMMABLE LIMITS LEL:	Not applicable
FLAMMABLE LIMITS UEL:	Not applicable
SENSITIVITY TO MECHANICAL IMPACT:	No

SENSITIVITY TO STATIC DISCHARGE

Sensitivity to static discharge is not expected.

EXTINGUISHING MEDIA

All standard extinguishing agents are suitable.None

SPECIAL FIRE FIGHTING PROCEDURES

Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Wipe, scrape or soak up in an inert material and put in a container for disposal. Wash walking surfaces with detergent and water to reduce slipping hazard. Wear proper protective equipment as specified in the protective equipment section.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Avoid contact with skin and eyes. Use only in well-ventilated areas. Avoid accidental ingestion of this material. Wash hands and face before eating, drinking, smoking, using toilet facilities, or applying cosmetics.

Keep container closed. Keep out of reach of children.

STORAGE

Keep away from heat, sparks and open flame.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Safety shower.; Ventilation and other forms of engineering controls are preferred for controlling exposures. Respiratory protection may be needed for non-routine or emergency situations.

RESPIRATORY PROTECTION

If exposure limits are exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Supplied air respirators may be required for non-routine or emergency situations. Respiratory protection must be provided in accordance with OSHA regulations (see 29CFR 1910.134).

PROTECTIVE GLOVES

Neoprene

EYE AND FACE PROTECTION

Monogoggles

OTHER PROTECTIVE EQUIPMENT

Wear suitable protective clothing and eye/face protection.

Exposure Guidelines

Component	CAS-No.	Source	Value
Butyl benzyl phthalate	85-68-7	Z_INTL_OEL, TWA	No data available.
Butyl benzyl phthalate	85-68-7	ACGIH, TWA	No data available.

Absence of values indicates none found

PEL - OSHA Permissible Exposure Limit; TLV - ACGIH Threshold Limit Value; TWA - Time Weighted Average; INTL REL - Internal Recommended Exposure Limit

OSHA revoked the Final Rule Limits of January 19, 1989 in response to the 11th Circuit Court of Appeals decision (AFL-CIO v. OSHA) effective June 30, 1993. See 29 CFR 1910.1000 (58 FR 35338).

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT (°C):	Not applicable
VAPOR PRESSURE (20 C) (MM HG):	Not applicable
VAPOR DENSITY (AIR=1):	Not applicable
FREEZING POINT:	Not applicable
PHYSICAL STATE:	Solid
ODOR:	Ammonia.
Color:	White
SPECIFIC GRAVITY:	No data available.
DENSITY:	No data available.
ACID / ALKALINITY (MEQ/G):	Not applicable
pH:	No data available.
SOLUBILITY IN WATER (20 C):	No data available.
SOLUBILITY IN ORGANIC SOLVENT (STATE SOLVENT):	No data available.
VOLATILE ORGANIC CONTENT:	0.35 %(m)
VOC EXCL. H2O & EXEMPTS (G/L):	36.98 g/l

10. STABILITY AND REACTIVITY

STABILITY
Stable

HAZARDOUS POLYMERIZATION.
Hazardous polymerisation does not occur.

HAZARDOUS THERMAL DECOMPOSITION / COMBUSTION PRODUCTS
Carbon dioxide; Toxic fumes.

INCOMPATIBLE MATERIALS
None known.

CONDITIONS TO AVOID
No data available.

11. TOXICOLOGICAL INFORMATION

ACUTE ORAL
Remarks: No data available.

ACUTE DERMAL
Remarks: No data available.

ACUTE INHALATION
Remarks: No data available.

OTHER
Contains ethylene glycol which causes birth defects in laboratory animals.

SENSITIZATION
No data available.

SKIN IRRITATION.
No data available.

EYE IRRITATION
No data available.

MUTAGENICITY
No data available.

OTHER EFFECTS OF OVEREXPOSURE
This product contains butyl benzyl phthalate. Adverse reproductive effects have been reported in animals exposed to butyl benzyl phthalate through chronic feeding studies. Additionally, chronically fed rats exhibited leukemia and lymphomas, including Hodgkin's disease.

12. ECOLOGICAL INFORMATION

ECOTOXICITY

Ecotoxicological data for this product is not available.

DISTRIBUTION
No data available.

CHEMICAL FATE
No data available.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS

Disposal should be made in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

Further Information: This product is not regarded as dangerous goods according to the national and international regulations on the transport of dangerous goods.

15. REGULATORY INFORMATION

Inventories

Australia Inventory of Chemical Substances (AICS)	n (Negative listing)	
EU list of existing chemical substances	n (Negative listing)	
Japan Inventory of Existing & New Chemical Substances (ENCS)	n (Negative listing)	
China Inventory of Existing Chemical Substances	n (Negative listing)	
Korea Existing Chemicals Inventory (KECI)	n (Negative listing)	
Canada DSL Inventory	y (positive listing)	
Canada NDSL Inventory	n (Negative listing)	
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	n (Negative listing)	
TSCA list	y (positive listing)	On TSCA Inventory

For inventories that are marked as quantity restricted or special cases, please contact Momentive.

US Regulatory Information

SARA (311,312) HAZARD CLASS

Acute Health Hazard; Chronic Health Hazard

SARA (313) CHEMICALS

75-21-8, Ethylene Oxide. 50-00-0, Formaldehyde. 79-06-1, Acrylamide. 108-05-4, Vinyl Acetate. 107-13-1, Acrylonitrile.

CALIFORNIA PROPOSITION 65

Warning! This product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

Canadian Regulatory Information

WHMIS CLASSIFICATION

D2A - Very Toxic Material Causing Other Toxic Effects
D2B - Toxic Material Causing Other Toxic Effects

16. OTHER INFORMATION

OTHER

These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

,C = ceiling limit NEGL = negligible
EST = estimated NF = none found
NA = not applicable UNKN = unknown
NE = none established REC = recommended
ND = none determined V = recommended by vendor
SKN = skin TS = trade secret
R = recommended MST = mist
NT = not tested STEL = short term exposure limit
ppm = parts per million ppb = parts per billion
By-product= reaction by-product, TSCA inventory status not required under 40 CFR part 720.30(h-2).

MATERIAL SAFETY DATA SHEET
(Similar to OSHA FORM 174)

N.A. = Not Applicable
Not Est. = Not Established
Prop. = Proprietary

Section 1 - Manufacturer / Distributor Information

Product Name PRONTO TB™ Ready to Use Foaming Disinfectant Cleaner **Product #** 0250
Supplier's Name National Chemical Laboratories of PA, Inc.
Supplier's Address 401 N. 10th Street - Philadelphia, PA 19123 **Emergency Phone No** 1 (800) 255-3924
HMIS Hazard Code **Health** 1 **Flammability** 0 **Phys Hazard** 0 **Chemical Name** N.A. Proprietary Blend
Chemical Family Disinfectant Cleaner **Formula** N.A. Blended Product
DOT Shipping Name N/A **Hazard Class** N/A
PKG Group
DOT ID # N/A

Section 2 - Hazardous Ingredients

CHEMICAL NAME	CAS NUMBER	% Concentration Range	Exposure Limit ACGIH	Exposure Limit TLV/PEL
Tetrasodium Ethylenediamine Tetraacetate	64-02-8			Not Est.
2-(2-Butoxyethoxy) Ethanol*	112-34-5			6.5 g/kg

Section 3 - Physical Data

Boiling Point (F) 212 **Specific Gravity** 0.960
Vapor Pressure = To Water **Evaporation Rate** = To Water
Vapor Density = To Water **pH**
Solubility in Wate Complete **pH(1)**
Appearance Slightly Viscous Opalescent Liquid **pH(2)**
Odor Herbal Fresh **VOC Content**

Section 4 - Fire and Explosion Data

Flammable Limits N.A. **LEL** **UEL**

Fire Fighting Equipment
Extinguishing Media
Unusual Fire Explosion Hazards None
Hazardous Combustion Products

Section 5 - Health Hazard Data

Routes of Entry **Inhalation** ☐ **Skin** ☑ **Ingestion** ☑

Effects of Over exposure Not est.

Emergency and First Aid Procedures IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice. IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Never give anything by mouth to an unconscious person. IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Conditions Aggravated by Exposure None **Threshold Limit Value** Not Est.

Listed None

Statement regarding Green Seal, Inc. Certification

Section 6 - Reactivity Data

Stability Stable
Conditions to Avoid None
Incompatibility Avoid contact with strong acids and oxidizers
Flash Point (F) None to boiling (TOC)
Hazardous Polymerization Will not occur.
Hazardous Decomposition Products Carbon Oxides and Amines

Section 7 - Spill and Leak Procedures

Spill Steps Recontainerize by mopping, wet vacuum, or using a suitable absorbent.

Waste Disposal Method Follow local, state, and federal regulations.

Section 8 - Special Protection Information

Respiratory Protection	Not required
Ventilation	Not required
Protective Gloves	Rubber
Eye Protection	Not required
Other Protective Equipment	Not required
Work /Hygenic Practices	

Section 9 - Special Precautions

Precautions Handling Storage	Store in sealed container in cool dry location, in a well ventilated area.
Other Precautions	It is a violation of federal law to use this product in a manner inconsistent with its labeling. Keep out of reach of children. For Commercial and Industrial Use Only.
CA Proposition 65 Statement	

The information contained in this MSDS was obtained from current and reliable sources, however the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions or handling, storage and disposal of this product are beyond the control of this company, it is not responsible for loss, injury and expense arising out of the product's improper use. No warranty, expressed or inferred, regarding the product described in this MSDS shall be created or inferred by any statement in this MSDS. Various government agencies may have specific regulations regarding the transportation, handling, storage, use or disposal of this product which may be covered by this MSDS. The user is responsible for full compliance

Date Prepared 6/27/2007 **Prepared By** G.C.

1 PRODUCT AND COMPANY IDENTIFICATION

Manufacturer

Holly Refining & Marketing Company
393 South 800 West

Woods Cross, Utah 84087

Contact: Health, Environmental & Safety Representative
Telephone Number: (801) 299-6600
FAX Number: (801) 299-6609
E-Mail:
Web

Product Name: Propane
Revision Date: 7/01/03
MSDS Number: 900107
Common Name: Propane
Chemical Family: Liquefied petroleum gas
Synonyms: LP-Gas Liquefied Petroleum Gas Odorized Propane Propane (Stenched) Propane (Unstenched) Propane Commercial Propane Motor Fuel Propane for Process Unodorized Propane

EMERGENCY OVERVIEW

24 Hour Emergency Telephone Numbers:
Spill, Leak, Fire or Accident
CHEMTREC: (800)424-9300
California Poison Control System: (800) 356-3129

Health Hazards/Precautionary Measures:
Liquefied gas may cause eye and skin burns and frostbite. Gas may reduce oxygen available for breathing. Use ventilation adequate to keep exposure below recommended limits, if any. Avoid contact with eyes, skin and clothing.

Physical Hazards/Precautionary Measures: Flammable gas. Can cause flash fire. Liquefied petroleum gas. Contents under pressure. Keep away from heat, sparks, flames, static electricity or other sources of ignition. Do not enter storage areas or confined space unless adequately ventilated.

Physical form: Gas or Liquid (Under pressure)
Odor: Odorless (or skunk, rotten egg, dead animal, or garlic if odorant added)
Appearance: Colorless

NFPA Hazard Class:	HMIS Hazard Class
Health: 3 (High)	Health: 3(High)
Flammability:4 (Extreme)	Flammability: 4 (Extreme)
Reactivity: 0 (Least)	Physical Hazard: 0 (Least)

*Indicates possible chronic health effects.

2 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

Cas #	Chemical Name	Perc.
74-98-6	Propane	>65
115-07-1	Propylene	<35
74-84-0	Ethane	<6
78-28-5: 106-97-8	Total Butanes	<5
75-08-1	Ethyl mercaptan	<0.1

3 HAZARDS IDENTIFICATION

Route of Entry:

Target Organs: Inadequate data available for this material.

Inhalation: Asphyxiant. High concentrations in confined spaces may limit oxygen available for breathing. See Signs and Symptoms.

Skin Contact: Contact with the liquefied or pressurized gas may cause frostbite ("cold" burn). This material is a gas under normal atmospheric conditions. No harmful effects from skin absorption are expected.

Eye Contact: Contact with the liquefied or pressurized gas may cause momentary freezing followed by swelling and eye damage.

Ingestion: This material is a gas under normal atmospheric conditions and ingestion is unlikely.

Other Comments:
High concentrations may reduce the amount of oxygen available for breathing, especially in confined spaces. Hypoxia (inadequate oxygen) during pregnancy may have adverse effects on the developing fetus. Exposure during pregnancy to high concentrations of carbon monoxide or carbon dioxide, which are produced during the combustion of hydrocarbon gases, can also cause harm to the developing fetus.

This material contains mercaptans. Mercaptans are toxic gases with the smell of rotten cabbage. The smell disappears rapidly because of olfactory fatigue. Therefore, odor may not be a reliable indicator of exposure. Effects of overexposure include nausea, vomiting, irritation of the nose, throat and digestive tract, signs of nervous system depression (e.g., headache, drowsiness, dizziness, loss of coordination and fatigue), pulmonary edema, muscle weakness, convulsions, respiratory failure, coma and death.

Pre-Existing Medical Conditions:
Exposure to high concentrations of this material may increase the sensitivity of the heart to certain drugs. Persons with pre-existing heart disorders may be more susceptible to this effect (see Section 4 -Note to Physicians).

4 FIRST AID MEASURES

Inhalation: If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

Skin Contact: Treat burned or frostbitten skin by flushing or immersing the affected area(s) in lukewarm water. After sensation has returned to the frostbitten skin, keep skin warm, dry, and clean. If blistering occurs, apply a sterile dressing. Seek immediate medical attention.

Eye Contact: For contact with the liquefied gas, hold eyelids apart and gently flush the affected eye(s) with lukewarm water. Seek immediate medical attention.

Ingestion: This material is a gas under normal atmospheric conditions and ingestion is unlikely.

Note To Physicians: Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to high concentrations of hydrocarbon solvents (e.g., in enclosedspaces or with deliberate abuse). The use of other drugs with less arrhythmogenic potential should be considered. If sympathomimetic drugs are administered, observe for the development of cardiac arrhythmias.

5 FIRE FIGHTING MEASURES

Flash Point:	-156°F/-104°C
Autoignition Temperature:	842°F/432°C
LEL:	2.1%
UEL:	9.5%
Flammability Classificati	Flammable Gas

Other:
SEE BELOW

Unusual Fire & Explosion Hazards:
This material is flammable and can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, or mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe). Vapors may travel considerable distances to a source of ignition where they can ignite, flash back, or explode. May create vapor/air explosion hazard indoors, in confined spaces, outdoors, or in sewers. Vapors are heavier than air and can accumulate in low areas. If container is not properly cooled, it can rupture in the heat of a fire. Closed containers exposed to extreme heat can rupture due to pressure buildup.

Extinguishing Media: Dry chemical or carbon dioxide is recommended. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

Fire Fighting Instructions: For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area, keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. If this cannot be done, allow fire to burn. Move undamaged containers from immediate hazard area if it can be done with minimal risk.

Stay away from ends of container. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done with minimal risk.

6 ACCIDENTAL RELEASE MEASURES

Flammable. Keep all sources of ignition and hot metal surfaces away from spill/release. The use of explosion-proof equipment is recommended.

Stay upwind and away from spill/release. Notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8).

Notify fire authorities and appropriate federal, state, and local agencies. Immediate cleanup of any spill is recommended. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, notify the National Response Center (phone number 800-424-8802).

7 HANDLING AND STORAGE

Handling Precautions:

Contents under pressure. The use of explosion-proof equipment is recommended and may be required (see appropriate fire codes). Refer to NFPA-704 and/or API RP 2003 for specific bonding/grounding requirements.

Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Sections 2 and 8).

Use good personal hygiene practices.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. Containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1 and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

Storage Requirements:

Keep container(s) tightly closed. Use and store this material in cool, dry, well-ventilated areas away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Post area "No Smoking or Open Flame." Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage. Outdoor or detached storage is preferred.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits (see Section 2), additional engineering controls may be required. Where explosive mixtures may be present, electrical systems safe for such locations must be used (see appropriate electrical codes).

Protective Equipment:

Respiratory:
Wear a positive pressure air supplied respirator in situations where there may be potential for airborne exposure above exposure limits (see Section 2). If exposure concentration is unknown or if conditions immediately dangerous to life or health (IDLH) exist, use a NIOSH approved self-contained breathing apparatus (SCBA) or equivalent operated in a pressure demand or other positive pressure mode. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin:
The use of thermally resistant gloves is recommended.

Eye/Face:
Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended. Depending on conditions of use, a face shield may be necessary.

Other Protective Equipment:
Eye wash and quick-drench shower facilities should be available in the work area. Thoroughly clean shoes and wash contaminated clothing before reuse. It is recommended that impervious clothing be worn when skin contact is possible.

Suggestions for the use of specific protective materials are based on readily available published

data. Users should check with specific manufacturers to confirm the performance of their products.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear, light yellow, or light green		
Physical State:	Gas or Liquid (Under pressure)	Boiling Point:	-44°F / -42°C
Odor:	Odorless (or skunk, rotten egg, dead animal, or garlic if odorant added)	Freezing/Melting Pt.:	-309.46°F
pH:	N/A	Solubility:	Negligible
Vapor Pressure:	Characteristic petroleum	Spec Grav./Density:	0.508-0.510 @60/60°F (15.6/15.6°C)
Vapor Density:	1.50		

Evap. Rate:	<1
Bulk Density:	N/A lbs/gal
Viscosity:	N/A
Percent Volatile:	N/A

10 STABILITY AND REACTIVITY

Stability:	Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure. Flammable gas.
Conditions to avoid:	Avoid all possible sources of ignition.
Materials to avoid (incompatability):	Avoid contact with strong oxidants.
Hazardous Decomposition products:	Combustion can yield carbon dioxide and carbon monoxide.
Hazardous Polymerization:	Will not occur.

11 TOXICOLOGICAL INFORMATION

Chronic Data:
No definitive information available on carcinogenicity, mutagenicity, target organ, or developmental toxicity.

12 ECOLOGICAL INFORMATION

There is no information available on the ecotoxicological effects of petroleum gases. Because of their high volatility, they are unlikely to cause ground or water pollution. Petroleum gases released into the environment will rapidly disperse into the atmosphere and undergo photochemical degradation.

13 DISPOSAL CONSIDERATIONS

This material, if discarded as produced, would be a RCRA "characteristic" hazardous waste due to the characteristic(s) of ignitability (D001). If the spilled or released material impacts soil, water, or other media, characteristic testing of the contaminated materials may be required prior to their disposal. Further, this material, once it becomes a waste, is subject to the land disposal restrictions in 40 CFR 268.40 and may require treatment prior to disposal to meet specific standards. Consult state and local regulations to determine whether they are more stringent than the federal requirements.

Container contents should be completely used and containers should be emptied prior to discard. Container

rinsate could be considered a RCRA hazardous waste and must be disposed of with care and in full compliance with federal, state and local regulations. Larger empty containers, such as drums, should be returned to the distributor or to a drum reconditioner. To assure proper disposal of smaller empty containers, consult with state and local regulations and disposal authorities.

14 TRANSPORT INFORMATION

DOT Shipping Description: Petroleum gases, liquefied,2.1,UN1075
Bulk Package Placard/Marking: Flammable Gas/1075
Non-Bulk Package Marking: Petroleum gases, liquefied, UN1075
Non-Bulk Package Label: Flammable gas
Packaging References: 49 CFR 173.306, 173.304, 173.314, 173.315
Emergency Response Guide: 115
Hazardous Substance/RQ None

Note:
IMDG:
Shipping Description: Petroleum gases, liquefied, 2.1, UN1075
Non-Bulk Package Marking: Petroleum gases, liquefied, UN1075
Labels: Flammable gas
Placards/Marking (Bulk): Flammable gas/1075
Packaging - Non-Bulk: P200
EmS#: F-D, S-U

IATA:
Proper Shipping Name: Petroleum gases, liquefied
Hazard Class/Division: 2.1
Un/ID#: UN1075
Packing Group: None
Subsidiary Risk: None
Non-Bulk Package Marking: Petroleum gases, liquefied, UN1075
Labels: Flammable gas

	LTD. QTY.	Passenger Aircraft	Cargo Aircraft Only
Packing Instruction #:	-	Forbidden	200
Max. Net Qty. Per Package:	-	-	150 kg

15 REGULATORY INFORMATION

EPA SARA 311/312 (Title III Hazard Categories):
Acute Health: Yes
Chronic Health: No
Fire Hazard: Yes
Pressure Hazard: Yes
Reactive Hazard: No

SARA 313 and 40 CFR 372:
This material contains the following chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372:

Component	CAS Number	Weight %
Propylene	115-07-1	<35
Mercaptans	Various	<0.1

California Proposition 65:
Warning: This material contains the following chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm, and are subject to the requirements of California Proposition 65 (CA Health & Safety

Code Section 25249.5):

Component	Effect
None	

Carcinogen Identification:
This material has not been identified as a carcinogen by NTP, IARC, or OSHA.
EPA (CERCLA) Reportable Quantity:
None

WHMIS Class:
A-Compressed Gas
B1-Flammable Gas

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16 OTHER INFORMATION

Issue Date:07/01/03
Previous Issue Date: None
Revised Sections: N/A
MSDS Number: 900107
Status: Final

Disclaimer of Expressed and Implied Warranties:
The information presented in this Material Safety Data Sheet is based on data believed to be accurate as of the date this Material Safety Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.

END OF MSDS DOCUMENT

SAFETY DATA SHEET

1. Identification

Product identifier **Propane**

Other means of identification

SDS number WC002

Product code UN1075

Recommended use Portable fuel.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer/Supplier Worthington Cylinder Corporation

Address 300 E. Breed St., Chilton, WI 5301
United States

Contact person Ann Stiefvater

E-mail address Ann.Stiefvater@worthingtonindustries.com

Telephone number 1-920-849-1740

Emergency telephone number 1-703-527-3887 International / CHEMTREC 1-800-424-9300 Domestic

2. Hazard(s) identification

Physical hazards Flammable gases — Category 1
Gases under pressure — Liquefied gas

Health hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement Extremely flammable gas. Contains gas under pressure; may explode if heated.

Precautionary statement

Prevention Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Response Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.

Storage Protect from sunlight. Store in a well-ventilated place.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) May displace oxygen and cause rapid suffocation.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Propane	74-98-6	87.5-100
Ethane	74-84-0	0-7
Propylene	115-07-1	0-5
Butane	106-97-8	0-2.5

Additives

Chemical name	CAS number	%
Ethyl Mercaptan	75-08-1	<0.005

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician or poison control center immediately.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation develops and persists. If frostbite occurs, immerse involved area in warm water (between 100 F/38 C and 110 F/43 C, not exceeding 112 F/44 C). Keep immersed for 20 to 40 minutes. Seek medical assistance.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

Ingestion Ingestion is not a typical route of exposure for gases or liquefied gases.

Most important symptoms/effects, acute and delayed Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite ("cold burn"). Very high exposure can cause suffocation from lack of oxygen. May cause drowsiness or dizziness.

Indication of immediate medical attention and special treatment needed Exposure may aggravate pre-existing respiratory disorders. Treat symptomatically.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Dry chemical, CO2, water spray, fog, or foam.

Unsuitable extinguishing media None known.

Specific hazards arising from the chemical Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire-fighting equipment/instructions Move container from fire area if it can be done without risk.

Do not extinguish fires unless gas flow can be stopped safely; explosive re-ignition may occur. Promptly isolate the scene by removing all persons from the vicinity of the incident. No action shall be taken involving any personal risk or without suitable training. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus. Stop flow of material. Use water to keep fire exposed containers cool and to protect personnel effecting shutoff. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop leak. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply.

General fire hazards Extremely flammable gas.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Evacuate the area promptly. No action shall be taken involving any personal risk or without suitable training. Keep unnecessary personnel away.

Ensure adequate ventilation. In case of inadequate ventilation, use respiratory protection. Wear appropriate personal protective equipment (See Section 8).

Methods and materials for containment and cleaning up Ventilate well, stop flow of gas or liquid if possible. Immediately contact emergency personnel.

Environmental precautions Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent from entering into soil, ditches, sanitary sewers, waterways and/or groundwater.

7. Handling and storage

Precautions for safe handling Eliminate all sources of ignition. Wear appropriate personal protective equipment (See Section 8). Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored, and processed. Do not breathe gas. Do not get in eyes, on skin, on clothing. Use only with adequate ventilation.

Conditions for safe storage, including any incompatibilities Store in accordance with local, regional, national, and international regulations. Secure cylinders in an upright position at all times, close all valves when not in use. Store in a cool, dry, well-ventilated place. Keep container tightly closed and sealed until ready for use. Protect cylinders from damage.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Propane (CAS 74-98-6)	PEL	1800 mg/m3 1000 ppm
Additives	**Type**	**Value**
Ethyl Mercaptan (CAS 75-08-1)	Ceiling	25 mg/m3 10 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Butane (CAS 106-97-8)	STEL	1000 ppm
Propylene (CAS 115-07-1)	TWA	500 ppm
Additives	**Type**	**Value**
Ethyl Mercaptan (CAS 75-08-1)	TWA	0.5 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Butane (CAS 106-97-8)	TWA	1900 mg/m3 800 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3 1000 ppm
Additives	**Type**	**Value**
Ethyl Mercaptan (CAS 75-08-1)	Ceiling	1.3 mg/m3 0.5 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Provide adequate ventilation and minimize the risk of inhalation of gas. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear approved safety glasses or goggles.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear protective clothing appropriate for the risk of exposure.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards Contact with liquefied gas might cause frostbites, in some cases with tissue damage. Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Do not eat, drink or smoke when using the product. Wash thoroughly after handling. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practices.

9. Physical and chemical properties

Appearance Colorless gas.

Physical state Gas.

Form Compressed liquefied gas.

Color Colorless.

Odor Rotten egg.

Odor threshold	Not available.
pH	Not applicable.
Melting point/freezing point	-306.4 °F (-188 °C)
Initial boiling point and boiling range	-43.6 °F (-42 °C) 14.7 psia
Flash point	-155.2 °F (-104.0 °C)
Evaporation rate	Not applicable.
Flammability (solid, gas)	Extremely flammable gas.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	2.15 %
Explosive limit - upper (%)	9.6 %
Vapor pressure	127 psig (21°C / 70°F)
Vapor density	Not available.
Relative density	0.504 (liquid) 1.5 (vapor) (air=1) @ 15°C / 60°F
Solubility(ies)	
Solubility (water)	Slightly soluble in water.
Partition coefficient (n-octanol/water)	1.77
Auto-ignition temperature	809.6 °F (432 °C)
Decomposition temperature	Not available.
Viscosity	Not applicable.
Other information	
Molecular weight	45 g/mol
Percent volatile	100 %

10. Stability and reactivity

Reactivity	Reacts violently with strong oxidants, nitrites, inorganic chlorides, chlorites and perchlorates causing fire and explosion hazard.
Chemical stability	Stable under normal temperature conditions and recommended use.
Possibility of hazardous reactions	Polymerization will not occur.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Strong oxidizing agents. Strong acids. Halogens.
Hazardous decomposition products	Carbon oxides. Hydrocarbons.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Not likely, due to the form of the product.
Inhalation	High concentrations: Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels. Breathing of high concentrations may cause dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness.
Skin contact	Contact with liquefied gas may cause frostbite.
Eye contact	Contact with liquefied gas may cause frostbite.
Symptoms related to the physical, chemical and toxicological characteristics	Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite ("cold burn"). Very high exposure can cause suffocation from lack of oxygen. May cause drowsiness or dizziness.

Information on toxicological effects

Acute toxicity	High concentration: Suffocation (asphyxiant) hazard - if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels.

Components	Species	Test Results
Butane (CAS 106-97-8)		
Acute		
Inhalation		
LC50	Mouse	680 mg/l, 2 Hours
	Rat	658 mg/l, 4 Hours
Propane (CAS 74-98-6)		
Acute		
Inhalation		
LC50	Rat	> 1442 mg/l, 15 Minutes
Propylene (CAS 115-07-1)		
Acute		
Inhalation		
LC50	Mouse	680 mg/l, 2 Hours
	Rat	658 mg/l, 4 Hours

Additives	Species	Test Results
Ethyl Mercaptan (CAS 75-08-1)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg
Inhalation		
LC50	Mouse	4420 mg/l, 4 Hours
Oral		
LD50	Rat	682 mg/kg

Skin corrosion/irritation Contact with liquefied gas might cause frostbites, in some cases with tissue damage.

Serious eye damage/eye irritation Direct contact with liquefied gas may cause eye damage from frostbite.

Respiratory or skin sensitization

Respiratory sensitization Not classified.

Skin sensitization Not classified.

Germ cell mutagenicity Not classified.

Carcinogenicity Not classified.

IARC Monographs. Overall Evaluation of Carcinogenicity

Propylene (CAS 115-07-1) 3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity Not classified.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not classified.

12. Ecological information

Ecotoxicity Not expected to be harmful to aquatic organisms.

Persistence and degradability The product is readily biodegradable.

Bioaccumulative potential The product is not expected to bioaccumulate.

Partition coefficient n-octanol / water (log Kow)

Propane (CAS Mixture)	1.77
Butane (CAS 106-97-8)	2.89
Propane (CAS 74-98-6)	2.36
Propylene (CAS 115-07-1)	1.77

Mobility in soil May evaporate quickly.

Mobility in general May evaporate quickly.

Other adverse effects	None known.

13. Disposal considerations

Disposal instructions	Use the container until empty. Do not dispose of any non-empty container. Empty containers have residual vapor that is flammable and explosive. Cylinders should be emptied and returned to a hazardous waste collection point. Do not puncture or incinerate even when empty. Dispose in accordance with all applicable regulations.
Hazardous waste code	D001: Waste Flammable material with a flash point <140 °F
Waste from residues / unused products	Dispose in accordance with all applicable regulations.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN1075
UN proper shipping name	Petroleum Gases, liquefied
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	19, T50
Packaging exceptions	306
Packaging non bulk	304
Packaging bulk	314, 315

IATA

UN number	UN1075
UN proper shipping name	Petroleum Gases, liquefied
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	No
ERG Code	10L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1075
UN proper shipping name	Petroleum Gases, liquefied
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No
EmS	F-D, S-U
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	This product is a compressed or liquefied gas and when transported in bulk is covered under IGC code.

15. Regulatory information

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Butane (CAS 106-97-8)	LISTED
Ethyl Mercaptan (CAS 75-08-1)	LISTED
Propane (CAS 74-98-6)	LISTED
Propylene (CAS 115-07-1)	LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - Yes
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Propylene	115-07-1	0-5

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Butane (CAS 106-97-8)
Ethyl Mercaptan (CAS 75-08-1)
Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

Clean Water Act (CWA) Section 112(r) (40 CFR 68.130) Hazardous substance

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Butane (CAS 106-97-8)
Ethyl Mercaptan (CAS 75-08-1)
Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

US. New Jersey Worker and Community Right-to-Know Act

Butane (CAS 106-97-8)
Ethyl Mercaptan (CAS 75-08-1)
Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

US. Pennsylvania Worker and Community Right-to-Know Law

Butane (CAS 106-97-8)
Ethyl Mercaptan (CAS 75-08-1)
Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

US. Rhode Island RTK

Butane (CAS 106-97-8)
Ethyl Mercaptan (CAS 75-08-1)
Propane (CAS 74-98-6)
Propylene (CAS 115-07-1)

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

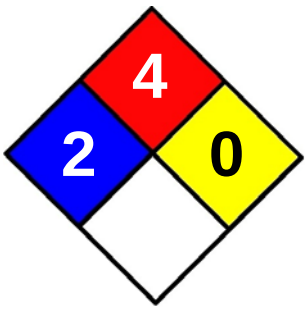
16. Other information, including date of preparation or last revision

Issue date 05-May-2014

Revision date 25-March-2015

Version # 03

NFPA Ratings



Disclaimer All information in this Material Safety Data Sheet is believed to be accurate and reliable. However, no guarantee or warranty of any kind is made with regard to the accuracy of information or the suitability of the recommendations contained herein. It is the user's responsibility to assess the safety and toxicity of this product under their own conditions of use and to comply with all applicable laws and regulations.

SAFETY DATA SHEET

Propane

Section 1. Identification

GHS product identifier : Propane

Chemical name : propane

Other means of identification : Propyl hydride; n-Propane; Dimethyl methane; Bottled gas; propane in gaseous state; propane liquefied, n-Propane; Dimethylmethane; Freon 290; Liquefied petroleum gas; Lpg; Propyl
hydride; R 290; C3H8; UN 1075; UN 1978; A-108; Hydrocarbon propellant.

Product use : Synthetic/Analytical chemistry.

Synonym : Propyl hydride; n-Propane; Dimethyl methane; Bottled gas; propane in gaseous state; propane liquefied, n-Propane; Dimethylmethane; Freon 290; Liquefied petroleum gas; Lpg; Propyl
hydride; R 290; C3H8; UN 1075; UN 1978; A-108; Hydrocarbon propellant.

SDS # : 001045

Supplier's details : Airgas USA, LLC and its affiliates
259 North Radnor-Chester Road
Suite 100
Radnor, PA 19087-5283
1-610-687-5253

Emergency telephone number (with hours of operation) : 1-866-734-3438

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE GASES - Category 1
GASES UNDER PRESSURE - Liquefied gas

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Extremely flammable gas.
Contains gas under pressure; may explode if heated.
May cause frostbite.
May displace oxygen and cause rapid suffocation.

Precautionary statements

General : Read and follow all Safety Data Sheets (SDS'S) before use. Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. Close valve after each use and when empty. Use equipment rated for cylinder pressure. Do not open valve until connected to equipment prepared for use. Use a back flow preventative device in the piping. Use only equipment of compatible materials of construction. Always keep container in upright position. Approach suspected leak area with caution.

Prevention : Never Put cylinders into unventilated areas of passenger vehicles. Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Use and store only outdoors or in a well ventilated place.

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Section 2. Hazards identification

Response : Leaking gas fire: Do not extinguish, unless leak can be stopped safely. Eliminate all ignition sources if safe to do so.

Storage : Protect from sunlight. Protect from sunlight when ambient temperature exceeds 52°C/125°F. Store in a well-ventilated place.

Disposal : Not applicable.

Hazards not otherwise classified : In addition to any other important health or physical hazards, this product may displace oxygen and cause rapid suffocation.

Section 3. Composition/information on ingredients

Substance/mixture : Substance

Chemical name : propane

Other means of identification : Propyl hydride; n-Propane; Dimethyl methane; Bottled gas; propane in gaseous state; propane liquefied, n-Propane; Dimethylmethane; Freon 290; Liquefied petroleum gas; Lpg; Propyl
hydride; R 290; C3H8; UN 1075; UN 1978; A-108; Hydrocarbon propellant.

CAS number/other identifiers

CAS number : 74-98-6

Product code : 001045

Ingredient name	%	CAS number
Propane	100	74-98-6

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. To avoid the risk of static discharges and gas ignition, soak contaminated clothing thoroughly with water before removing it. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : As this product is a gas, refer to the inhalation section.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

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Section 4. First aid measures

Frostbite : Try to warm up the frozen tissues and seek medical attention.

Ingestion : As this product is a gas, refer to the inhalation section.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : Contains gas under pressure. Extremely flammable gas. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Contact supplier immediately for specialist advice. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. If involved in fire, shut off flow immediately if it can be done without risk. If this is impossible, withdraw from area and allow fire to burn. Fight fire from protected location or maximum possible distance. Eliminate all ignition sources if safe to do so.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : Accidental releases pose a serious fire or explosion hazard. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

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Section 6. Accidental release measures

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment.

Large spill : Immediately contact emergency personnel. Stop leak if without risk. Use spark-proof tools and explosion-proof equipment. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Contains gas under pressure. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not puncture or incinerate container. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Eliminate all ignition sources. Keep container tightly closed and sealed until ready for use. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Propane	**ACGIH TLV (United States, 3/2012).** TWA: 1000 ppm 8 hours. **NIOSH REL (United States, 1/2013).** TWA: 1800 mg/m³ 10 hours. TWA: 1000 ppm 10 hours. **OSHA PEL (United States, 6/2010).** TWA: 1800 mg/m³ 8 hours. TWA: 1000 ppm 8 hours.

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Section 8. Exposure controls/personal protection

	OSHA PEL 1989 (United States, 3/1989). TWA: 1800 mg/m³ 8 hours. TWA: 1000 ppm 8 hours.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Gas. [Liquefied compressed gas.]

Color : Colorless.

Molecular weight : 44.11 g/mole

Molecular formula : C3-H8

Boiling/condensation point : -161.48°C (-258.7°F)

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Section 9. Physical and chemical properties

Melting/freezing point	:	-187.6°C (-305.7°F)
Critical temperature	:	96.55°C (205.8°F)
Odor	:	Odorless.BUT MAY HAVE SKUNK ODOR ADDED.
Odor threshold	:	Not available.
pH	:	Not available.
Flash point	:	Closed cup: -104°C (-155.2°F) Open cup: -104°C (-155.2°F)
Burning time	:	Not applicable.
Burning rate	:	Not applicable.
Evaporation rate	:	Not available.
Flammability (solid, gas)	:	Extremely flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and oxidizing materials.
Lower and upper explosive (flammable) limits	:	Lower: 1.8% Upper: 8.4%
Vapor pressure	:	109 (psig)
Vapor density	:	1.6 (Air = 1)
Specific Volume (ft ^{3}/lb)	:	8.6206
Gas Density (lb/ft ^{3})	:	0.116 (25°C / 77 to °F)
Relative density	:	Not applicable.
Solubility	:	Not available.
Solubility in water	:	0.0244 g/l
Partition coefficient: n-octanol/water	:	1.09
Auto-ignition temperature	:	287°C (548.6°F)
Decomposition temperature	:	Not available.
SADT	:	Not available.
Viscosity	:	Not applicable.

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatibility with various substances	:	Extremely reactive or incompatible with the following materials: oxidizing materials.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization	:	Under normal conditions of storage and use, hazardous polymerization will not occur.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : As this product is a gas, refer to the inhalation section.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

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Section 11. Toxicological information

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Propane	1.09	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Empty Airgas-owned pressure vessels should be returned to Airgas. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

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Section 14. Transport information

	DOT	TDG	Mexico	IMDG	IATA
UN number	UN1978	UN1978	UN1978	UN1978	UN1978
UN proper shipping name	PROPANE	PROPANE	PROPANE	PROPANE	PROPANE
Transport hazard class(es)	2.1	2.1	2.1	2.1	2.1
Packing group	-	-	-	-	-
Environment	No.	No.	No.	No.	No.
Additional information	**Limited quantity** Yes. **Packaging instruction** **Passenger aircraft** Quantity limitation: Forbidden. **Cargo aircraft** Quantity limitation: 150 kg **Special provisions** 19, T50	**Explosive Limit and Limited Quantity Index** 0.125 **ERAP Index** 3000 **Passenger Carrying Ship Index** 65 **Passenger Carrying Road or Rail Index** Forbidden **Special provisions** 29, 42	-	-	**Passenger and Cargo Aircraft**Quantity limitation: 0 Forbidden **Cargo Aircraft Only** Quantity limitation: 150 kg

"Refer to CFR 49 (or authority having jurisdiction) to determine the information required for shipment of the product."

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined

United States inventory (TSCA 8b): This material is listed or exempted.

Clean Air Act (CAA) 112 regulated flammable substances: propane

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

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Section 15. Regulatory information

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Fire hazard
Sudden release of pressure

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Propane	100	Yes.	Yes.	No.	No.	No.

State regulations

Massachusetts : This material is listed.

New York : This material is not listed.

New Jersey : This material is listed.

Pennsylvania : This material is listed.

Canada inventory : This material is listed or exempted.

International regulations

International lists : **Australia inventory (AICS)**: This material is listed or exempted.
China inventory (IECSC): This material is listed or exempted.
Japan inventory: This material is listed or exempted.
Korea inventory: This material is listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): This material is listed or exempted.
Philippines inventory (PICCS): This material is listed or exempted.
Taiwan inventory (CSNN): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

Canada

WHMIS (Canada) : Class A: Compressed gas.
Class B-1: Flammable gas.

CEPA Toxic substances: This material is not listed.
Canadian ARET: This material is not listed.
Canadian NPRI: This material is listed.
Alberta Designated Substances: This material is not listed.
Ontario Designated Substances: This material is not listed.
Quebec Designated Substances: This material is not listed.

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Section 16. Other information

Canada Label requirements : Class A: Compressed gas.
Class B-1: Flammable gas.

Hazardous Material Information System (U.S.A.)

Health	1
Flammability	4
Physical hazards	2

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Date of printing : 10/16/2014.

Date of issue/Date of revision : 10/16/2014.

Date of previous issue : 10/8/2014.

Version : 0.02

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United NationsACGIH – American Conference of Governmental Industrial Hygienists
AIHA – American Industrial Hygiene Association
CAS – Chemical Abstract Services
CEPA – Canadian Environmental Protection Act
CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act (EPA)
CFR – United States Code of Federal Regulations

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Section 16. Other information

CPR – Controlled Products Regulations
DSL – Domestic Substances List
GWP – Global Warming Potential
IARC – International Agency for Research on Cancer
ICAO – International Civil Aviation Organisation
Inh – Inhalation
LC – Lethal concentration
LD – Lethal dosage
NDSL – Non-Domestic Substances List
NIOSH – National Institute for Occupational Safety and Health
TDG – Canadian Transportation of Dangerous Goods Act and Regulations
TLV – Threshold Limit Value
TSCA – Toxic Substances Control Act
WEEL – Workplace Environmental Exposure Level
WHMIS – Canadian Workplace Hazardous Material Information System

References : Not available.

Indicates information that has changed from previously issued version.

Other special considerations : The information below is given to call attention to the issue of “Naturally occurring radioactive materials”. Although Radon-222 levels in the product represented by this MSDS do not present any direct Radon exposure hazard, customers should be aware of the potential for Radon daughter build up within their processing systems, whatever the source of their product streams. Radon-222 is a naturally occurring radioactive gas which can be a contaminant in natural gas. During subsequent processing , Radon tends to be concentrated in Liquefied Petroleum Gas streams and in product streams having a similar boiling point range. Industry experience has shown that this product may contain small amounts of Radon-222 and its radioactive decay products, called Radon “daughters”. The actual concentration of Radon-222 and radioactive daughters in the delivered product is dependent on the geographical source of the natural gas and storage time prior to delivery. Process equipment (i.e. lines, filters, pumps and reaction units) may accumulate significant levels of radioactive daughters and show a gamma radiation reading during operation. A potential external radiation hazard exists at or near any pipe valve or vessel containing a Radon enriched stream, or containing internal deposits of radioactive material due to the transmission of gamma radiation through its wall. Field studies reported in the literature have not shown any conditions that subject workers to cumulative exposures in excess of general population limits. Equipment emitting gamma radiation should be presumed to be internally contaminated with alpha emitting decay products which may be a hazard if inhaled or ingested. During maintenance operations that require the opening of contaminated process equipment, the flow of gas should be stopped and a four hour delay enforced to allow the gamma radiation to drop to background levels. Protective equipment such as coveralls, gloves, and respirator (NIOSH/MHSA approved for high efficiency particulates and radionuclides, or supplied air) should be worn by personnel entering a vessel or working on contaminated process equipment to prevent skin contamination, ingestion, or inhalation of any residues containing alpha radiation. Airborne contamination may be minimized by handling scale and/or contaminated materials in a wet state.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 660.00

Revision Date: October 20, 2015

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

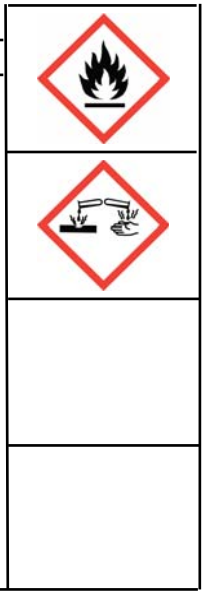
Propionic Acid

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Flammable liquids (Category 3). Flammable liquid and vapor (H226). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

Hazard class: Skin corrosion or irritation (Category 1). Causes severe skin burns and eye damage (H314). Do not breathe gas, mist, vapors or spray (P260).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Propionic acid	79-09-4	CH_3CH_2COOH	74.08	
Synonyms: Propanoic acid; Carboxyethane; Ethanecarboxylic acid; Ethylformic acid; Methylacetic acid; Metacetonic acid				

SECTION 4 — FIRST AID MEASURES

Immediately call a POISON CENTER or physician (P310).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If on skin (or hair):** Immediately remove all contaminated clothing. Rinse skin with water (P303+P361 +P353). Wash contaminated clothing before reuse (P363).
If swallowed: Rinse mouth. Do NOT induce vomiting (P301+P330+P331).

SECTION 5 — FIRE FIGHTING MEASURES

Class II combustible liquid.
Flash point: 52 °C Flammable limits: Lower: 2.9% Upper: 12.1% Autoignition Temperature: 465 °C
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher (P370+P378).

NFPA CODE
H-3
F-2
R-0

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all ignition sources and ventilate area. Contain spill with sand or other inert absorbent material, neutralize with sodium bicarbonate or calcium hydroxide and deposit in sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #1. Store with acids, anhydrides and peracids.
Keep container tightly closed (P233). Keep cool (P235).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).
Exposure guidelines: TLV 10 ppm (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless, oily liquid. Rancid odor.
Soluble: Water, alcohol and chloroform.

Boiling point: 140-141 ^{o}C
Melting point: -21 ^{o}C
Flash point: 51 ^{o}C
Ignition temp: 485 ^{o}C
Specific gravity: 0.988
Vapor pressure at 20 ^{o}C: 4 hPa (3 mm Hg)

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with bases, oxidizing agents, reducing agents and halogens.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Severe skin and eye burns and irritation; blurred vision, corneal burns; skin burns; abdominal pain, nausea, vomiting
Chronic effects: N.A.
Target organs: Eyes, skin, respiratory tract.

ORL-RAT LD_{50}: 2600 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: 500 mg/kg

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #24a is one option.

SECTION 14 — TRANSPORT INFORMATION

UN number: UN3463. Shipping name: Propionic Acid. Hazard class: 8, Corrosive. Packing group: II

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (201-176-3), RCRA code D001, D002.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: October 20, 2015

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MATERIAL SAFETY DATA SHEET

PRODUCT IDENTIFICATION

PRODUCT NAME: Propylene Glycol (Inhibited Solution)

(NFPA RATINGS)
HEALTH: 0
FIRE: 1
REACTIVITY: 0

PRODUCT INFORMATION (800) 262-0012	**MEDICAL EMERGENCY** (856) 455-4555
TRANSPORTATION EMERGENCY CHEMTREC (800) 424-9300	**DISTRIBUTOR / MANUFACTURER** NATIONAL REFRIGERANTS, INC. 661 KENYON AVE. ROSENHAYN, NJ

COMPOSITION/INFORMATION ON INGREDIENTS

Propylene Glycol	(CAS#57-55-6)	35-96 %
Demineralized Water	(CAS#7732-18-5)	< 65 %
Dipotassium Hydrogen Phosphate	(CAS#7758-11-4)	< 5 %

HAZARDS IDENTIFICATIONS

EMERGENCY OVERVIEW:

APPEARANCE: Light Blue

PHYSICAL STATE: Liquid

ODOR: Mild

HAZARDS OF PRODUCT: No significant immediate hazards for emergency response are known.

POTENTIAL HEALTH EFFECTS:

EFFECTS OF SINGLE ACUTE OVEREXPOSURE

INHALATION: At room temperature, exposure to vapor is minimal due to low volatility. Mist may cause irritation of upper respiratory tract (nose and throat).

EYE CONTACT: May cause slight temporary eye irritation. Corneal injury is unlikely.

SKIN CONTACT: Prolonged contact is essentially nonirritating to the skin. Repeated contact may cause flaking and softening of skin.

SKIN ABSORPTION: Prolonged skin contact is unlikely to result in absorption of harmful amounts.

INGESTION: Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

CHRONIC, PROLONGED OR REPEATED OVEREXPOSURE

EFFECTS OF REPEATED OVEREXPOSURE: In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

OTHER EFFECTS OF OVEREXPOSURE: No information currently available.

FIRST AID MEASURES

INHALATION:	Move person to fresh air; if effects occur, consult a physician.
EYE CONTACT:	Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.
SKIN CONTACT:	Wash skin with plenty of water.
INGESTION:	No emergency medical treatment necessary.
ADVICE TO PHYSICIANS:	No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:
REFER TO PHYSICAL AND CHEMICAL PROPERTIES SECTION

EXTINGUISHING MEDIA: Water fog of fine spray. Dry chemical & carbon dioxide fire extinguishers. Foam. Do not use direct water stream, may spread fire. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. Liquid mist of the product can burn. Flammable concentrations of vapor can accumulate at temperatures above flash point.

FIRE FIGHTING PROCEDURES: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of re-ignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream, may spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

HAZARDOUS COMBUSTION PRODUCTS: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide, Carbon dioxide.

ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR OTHER RELEASE:

Small spills: Absorb with materials such as—cat litter, sawdust, vermiculite. Collect in suitable and properly labeled container.

Large spills: Dike area to contain spill. Recover spilled material if possible. See Disposal Considerations section for additional information.

PERSONAL PRECAUTIONS: Use appropriate safety equipment. For additional information, refer to Exposure Controls and Personal Protection section.

ENVIRONMENTAL PRECAUTIONS: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Ecological Information section.

HANDLING AND STORAGE

HANDLING: (Always wear recommended personal protective equipment)

Ventilation: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

Other Precautions: Spills of these organic materials on hot fibrous insulations may lead to lowering of the auto-ignition temperatures possibly resulting in spontaneous combustion.

STORAGE: Store below: 121 deg. C (250 deg. F). Do not store in: galvanized steel.

EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES

INGREDIENT NAME	ACGIH TLV	OSHA PEL	OTHER LIMIT	SKIN. FORM
Propylene glycol	NA	NA	10 mg/m3 TWA 8 AIHA WEEL	

In the Exposure Limits Chart above, if there is no specific qualifier (i.e. Aerosol) listed in the Form Column for a particular limit, the listed limit includes all airborne forms of the substance that can be inhaled.

A "Yes" in the Skin Column indicates a potential significant contribution to overall exposure by the cutaneous (skin) route, including mucous membranes and the eyes, either by contact with vapors or by direct skin contact with the substances. A "Blank" in the Skin Column indicates that exposure by the cutaneous (skin) route is not a potential significant contributor to overall exposure.

PERSONAL PROTECTION

Respiratory Protection: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator. In dusty or misty atmospheres, use and approved particulate respirator.

Ventilation: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

Eye Protection: Use safety glasses.

Other Protective Equipment: No precautions other than clean body-covering clothing should be needed. Use gloves chemically resistant to this material.

PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Light Blue
PHYSICAL STATE: Liquid
VAPOR PRESSURE: 0.7 mmHg 20 deg. C
ODOR: Mild
FREEZING POINT: < = -51 deg. C < = -60 deg. F
SPECIFIC GRAVITY (H_2O=1): 1.05 20 deg. C / 20 deg. C
SOLUBILITY IN WATER (by weight): 100% 20 deg. C
pH: 9-11 (5 % solution in water)
FLAMMABLE LIMITS IN AIR:
Lower 2.6 % (V) 100 deg. C (Propylene Glycol)
Upper 12.5 % (V) 130 deg. C (Propylene Glycol)

VAPOR DENSITY (Air=1): 2.6
EVAPORATION RATE (Butyl Acetate = 1): 0.07
PERCENT VOLATILES: 98 Wt. %
BOILING POINT (760 mmHg): 162 deg. C 323 deg. F
MELTING POINT: Not Applicable for liquids
AUTOIGNITION TEMPERATURE: 416 deg. C 780 deg. F
FLASH POINT: 102 deg. C 216 deg. F Closed Cup (Propylene glycol)

NOTE: Physical and Chemical Properties are based on a 96% solution of Propylene Glycol. Diluted concentrations of Propylene Glycol may have slightly different Properties.

STABILITY AND REACTIVITY

STABILITY/INSTABILITY: Thermally stable at recommended temperatures and pressures.

CONDITIONS TO AVOID: Product can oxidize at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

MATERIALS TO AVOID: Avoid contact with: Strong acids, strong bases and strong oxidizers.

THERMAL DECOMPOSITION: Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Aldehydes, Alcohols, and Ethers.

HAZARDOUS POLYMERIZATION: Will not occur.

TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

PERORAL
Rat; female; LD50 = 20300 mg/kg

PERCUTANEOUS
Based on information for a similar material:
Rabbit; LD50=> 10000 mg/kg

DEVELOPMENTAL TOXICITY:
Contains component(s) which did not cause birth defects or any other fetal effects in lab animals. The component(s) is/are: Propylene glycol.

REPRODUCTIVE TOXICITY:
Contains component(s) which did not interfere with reproduction in animal studies. Contains component(s) which did not interfere with fertility in animal studies. The component(s) is/are: Propylene glycol.

CHRONIC TOXICITY AND CARCINOGENICITY:
Similar formulations did not cause cancer in laboratory animals.

GENETIC TOXICOLOGY:
In Vitro: In vitro genetic toxicity studies were negative.
In Vitro: Genetic toxicity studies in animals were negative for component(s) tested.

SIGNIFICANT DATA WITH POSSIBLE RELEVANCE TO HUMANS:
In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE:
Based largely or completely on information for: Propylene glycol. Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Degradation is expected in the atmospheric environment within minutes to hours.

ECOTOXICITY:
Based largely or completely on information for: Propylene glycol. Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50>100 mg/L in the most sensitive species tested).

FURTHER INFORMATION:
Based largely or completely on information for: Propylene glycol. Bio-concentration potential is low (BCF < 100 or Log Pow < 3). Potential for mobility in soil is very high (Koc between 0 and 50).

DISPOSAL CONSIDERATIONS

DISPOSAL:

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OR WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. NATIONAL REFRIGERANTS HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN THIS MSDS'S COMPOSITION INFORMATION SECTION. FOR UNUSED & UNCONTAMINATED PRODUCT, THE PREFERRED OPTIONS INCLUDED SENDING TO A LICENSED, PERMITTED: RECYCLER. RECLAIMER. INCINERATOR OR OTHER THERMAL DESTRUCTION DEVICE.

TRANSPORTATION INFORMATION

PROPER SHIPPING NAME:

NON-BULK------Not Regulated by DOT

BULK------Not Regulated by DOT

REGULATORY INFORMATION

FEDERAL/NATIONAL:

OSHA Hazard communication standard

This product is not a "hazardous chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-To Know Act of 1986) Section 313

To the best of our knowledge this product does not contain chemicals at levels which require reporting under this statute.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-To Know Act of 1986) Section 302

To the best of out knowledge this product does not contain chemicals at levels which require reporting under this statute.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-To Know Act of 1986) Section 311 & 312

Delayed (Chronic) Health Hazard:	No
Fire Hazard:	No
Immediate (Acute) Health Hazard:	No
Reactive Hazard:	No
Sudden Release of Pressure Hazard:	No

Toxic Substances Control Act (TSCA)

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30.

CEPA – Domestic substances List (DSL)

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

European Inventory of Existing Commercial Chemical Substances (EINECS)

All components of this product are on the EINECS inventory or are exempt from EINECS inventory requirements.

STATE/LOCAL:

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:

The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Component	CAS#
Propylene glycol	57-55-6

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:

To the best of our knowledge this product does not contain chemicals at levels which require reporting under this statute.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

California SCAQMD Rule 443.1 (South Coast Air Quality Management District Rule 443.1, Labeling of Materials Containing Organic Solvents

VOC: Vapor pressure 0.66 mmHg @ 20 deg. C
1002 g/l VOC
1030 g/l less water and less exempted solvents

This section provides selected regulatory information on this product including its components. This is not intended to include all regulations. It is the responsibility of the user to know and comply with all applicable rules, regulations and laws relating to the product being used.

****

National Refrigerants, Inc. believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be valid where such product is used in combination with any other methods of use of the product and of the information referred to herein are beyond the control of National Refrigerants. National Refrigerants expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.

DATE OF LATEST REVISION/REVIEW: 10/09
PERSON RESPONSIBLE FOR MSDS: Ray Madariaga

Pull-A-Spout Oiler

MSDS# CO-1

April 2012 6 pages

1. PRODUCT AND COMPANY INFORMATION

Product Name: Pull-A-Spout Oiler
Manufacturer: Diversitech
6650 Sugarloaf Parkway, Duluth, GA, 30097
Emergency Phone No.: +1813.248.0585 24 Hours, 7 Days, Chem-Tel, Inc.
Phone (For Information): 1+678.542.3600
Date: 04/25/2012
Prepared By: A. Jernigan

2. HAZARD IDENTIFICATION

Emergency Overview:
Appearance and Odor: Clear light brown. Liquid at room temperature. Slight hydrocarbon.
Health Hazards: High-pressure injection under the skin may cause serious damage including local necrosis.
Safety Hazards: Not classified as flammable but will burn.
Health Hazards: Not expected to be a health hazard when used under normal conditions.
Health Hazards Inhalation: Under normal conditions of use, this is not expected to be a primary route of exposure.
Skin Contact: Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.
Eye Contact: May cause slight irritation to eyes.
Ingestion: Low toxicity if swallowed.
Other Information: High-pressure injection under the skin may cause serious damage including local necrosis. Used oil may contain harmful impurities.
Signs and Symptoms: Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Local necrosis is evidenced by delayed onset of pain and tissue damage a few hours following injection. Ingestion may result in nausea, vomiting and/or diarrhea.
Aggravated Medical Condition: Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Skin.
Environmental Hazards: Not classified as dangerous for the environment.
Additional Information: Under normal conditions of use or in a foreseeable emergency, this product does not meet the definition of a hazardous chemical when evaluated according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
Appearance and odor: Clear straw yellow liquid; mild bland odor.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Component	CAS No.	EINECS No.	% BY WT.	Hazard Symbol	Risk Phrases
Heavy Naphthenic Clay					
Treated Petroleum Distillates	64742-44-5	265-146-1	94-100	T	R45

EPA HAZARD CATEGORIES: None
The meaning of Risk Phrases can be found in Section 15.

Pull-A-Spout Oiler

4. FIRST-AID MEASURES

General Information: Not expected to be a health hazard when used under normal conditions.
Inhalation: No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
Skin Contact: Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention. When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the effected person should be sent immediately to a hospital. Do not wait for symptoms to develop. Obtain medical attention even in the absence of apparent wounds.
Eye Contact: Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.
Ingestion: In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.
Advice to Physician: Treat symptomatically. High pressure injection injuries require prompt surgical intervention and possibly steroid therapy, to minimize tissue damage and loss of function. Because entry wounds are small and do not reflect the seriousness of the underlying damage, surgical exploration to determine the extent of involvement may be necessary. Local anesthetics or hot soaks should be avoided because they can contribute to swelling, vasospasm and ischemia. Prompt surgical decompression, debridement and evacuation of foreign material should be performed under general anesthetics, and wide exploration is essential.

5. FIRE FIGHTING MEASURES

Extinguishing media: Use agents approved for Class B fires: dry chemical, CO_2, foam, water fog.
Special Fire Fighting Procedures: firefighters should wear niosh/mnsa approved self-contained breathing apparatus and full protective gear when fighting fires involving this product. Keep containers cooled with a water spray if involved in a fire. Shut off the source of the spill if it is safe to do so. Cover the burning liquid with the extinguishing agent.
Unusual Fire and Explosion Hazards: Burning fluid may evolve irritating/noxious fumes, smoke carbon monoxide, and minor amounts of sulfur and nitrogen. Water may cause frothing or splattering when used as an extinguishing agent.

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment. See **Exposure Controls/Personal Protection Section** of this MSDS. See **Disposal Considerations Section** for information on disposal. Observe all relevant local and international regulations.
Protective measures: Avoid contact with skin and eyes. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Clean Up Methods: Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent.
Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly.
Additional Advice: Local authorities should be advised if significant spillages cannot be contained. Spills that enter water bodies must be reported to the EPA National Response Center (800-546-2972)

Pull-A-Spout Oiler

7. HANDLING AND STORAGE

Avoid contact with skin, eyes, and clothing. Keep containers closed when not in use. Store in a dry, cool, well-ventilated area. Empty containers retain residue and can be dangerous. All containers should be disposed of in an environmentally safe manner, and in accordance with all governmental regulations. Empty drums should be consigned to a licensed drum reconditioner. Storage Temperature: 0 - 50 °C / 32 - 122 °F

Keep this and all chemicals out of the reach of children.

Recommended Materials: For containers or container linings, use mild steel or high density polyethylene.

Unsuitable Materials: PVC.

Additional Information: Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA PEL: 5 mg/m^3, 8hr (oil mist

AIGCH TLV: 10 mg/m^3, 8hr (oil mist)

Respiratory Protection (Specify Type): Use in a well-ventilated area. If mist is being generated and exceeds the TLV, a respiratory program meeting OSHA 1910.134 and ANSI Z88.2 requirements must be followed.

Ventilation: Local exhaust is recommended when used in enclosed areas.

Protective Gloves: Neoprene or nitrile gloves recommended to minimize skin contact. Other materials may be used if there is documented evidence of compatibility.

Eye protection: Safety glasses (ANSI Z87.1) or approved equivalent.

Other Protective Clothing: Neoprene aprons, overshoes, oversleeves or other impervious clothing as necessary to minimize exposure.

Work Hygienic Practices: Use proper industrial hygiene practices to minimize hazardous exposure. Wash hands after handling this material, and before eating ,smoking or using the toilet.

9. PHYSICAL/CHEMICAL PROPERTIES

Appearance: Light yellow liquid

Odor: Petroleum oil odor

Odor threshold: n.a.

pH: n.a.

Melting point/freezing point: n.a.

Initial boiling point and boiling range: >260°C (176°F)

Flash point: 165°C (330°F) COC

Evaporation rate (Water=1): >10

Flammability limits %:

Vapor pressure: <.001kPa@20°C

Vapor density (Air=1): >5

Relative density: 0.91

Solubility: Insoluble in water

Partition Coefficient: n-octanol/water: n.a.

Auto-ignition temperature: n.a.

Decomposition temperature: n.a.

Pull-A-Spout Oiler

Viscosity: 55cSt@40°F
Explosive properties: Not applicable
Oxidizing properties: Not applicable
n.a. = not available

10. STABILITY AND REACTIVITY
Stability: Stable
Conditions to avoid: Excessive heat; formation of oil mist.
Incompatibility (Materials to avoid): Strong oxidizers, strong alkalis, strong acids, and compressed oxygen
Hazardous Decomposition or Byproducts: Analogous compounds evolve carbon monoxide, carbon dioxide, and other unidentified fragments when burned.
Hazardous Polymerization: Will not occur

11. TOXICOLOGICAL INFORMATION
Basis for Assessment: Information given is based on data on the components and the toxicology of similar products.
Acute Oral Toxicity: Expected to be of low toxicity: LD50 > 5000 mg/kg, Rat
Acute Dermal Toxicity: Expected to be of low toxicity: LD50 > 5000 mg/kg, Rabbit
Acute Inhalation Toxicity: Not considered to be an inhalation hazard under normal conditions of use.
Skin Irritation: Expected to be slightly irritating. Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.
Eye Irritation: Expected to be slightly irritating.
Respiratory Irritation: Inhalation of vapors or mists may cause irritation.
Sensitization: Not expected to be a skin sensitizer.
Repeated Dose Toxicity: Not expected to be a hazard.
Mutagenicity: Not considered a mutagenic hazard.
Carcinogenicity: Product contains mineral oils of types shown to be non-carcinogenic in animal skin-painting studies. Highly refined mineral oils are not classified as carcinogenic by the **International Agency for Research on Cancer (IARC).** Other components are not known to be associated with carcinogenic effects.
Reproductive and Developmental Toxicity: Not expected to be a hazard.
Additional Information: Used oils may contain harmful impurities that have accumulated during use. Handle these materials with caution and avoid skin contact as far as possible.

Pull-A-Spout Oiler

12. ECOLOGICAL INFORMATION

Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products.

Acute Toxicity: Poorly soluble mixture. May cause physical fouling of aquatic organisms. Expected to be practically non toxic: LL/EL/IL50 >100 mg/l (to aquatic organisms) (LL/EL50 expressed as the nominal amount of product required to prepare aqueous test extract). Mineral oil is not expected to cause any chronic effects to aquatic organisms at concentrations less than 1 mg/l.

Mobility: Liquid under most environmental conditions. Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.

Persistence/degradability: Expected to be not readily biodegradable. Major constituents are expected to be inherently biodegradable, but the product contains components that may persist in the environment**.**

Bioaccumulation: Contains components with the potential for bioaccumulation.

Other Adverse Effects: Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical ozone potential or global warming potential**.**

13. DISPOSAL CONSIDERATIONS

Material Disposal: Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses.

Container Disposal: Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand.

Local Legislation: Disposal should be in accordance with applicable regional, national, and local laws and regulations.

14. TRANSPORT INFORMATION

UN Number: None

UN Proper Shipping Name: None

Transport Hazard Class(es): Packing group: None

Environmental Hazards: Not environmentally Hazardous Substance of Marine Pollutant

ADR/RID Transport Information: Not dangerous for transport under ADR/RID, IMO and IATA/ICAO regulations.

ADR/RID Class: None Allocated

ADR/RID Packing Group: None Allocated

IMDG Hazard Class: None Allocated

IMDG Packing Group: None Allocated

ADNR Class: None Allocated

ADNR Item: None Allocated

IATA Hazard Class: None Allocated

IATA Packing Group: None Allocated

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

Pull-A-Spout Oiler

15. REGULATORY INFORMATION
The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.
T Toxic
R-Phrases
R45: May cause cancer
EINECS: All components listed or polymer exempt.
TSCA: All components listed
DSL: All components listed.
SARA Hazard Categories (311/312/313)
SARA 311/312: No Hazards.
Section 313: Emissions and release reporting may be required for users of this product within the manufacturing sector. This does not apply to service companies.
State Regulatory Status
California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)
This material does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

16. OTHER INFORMATION
HMIS DATA
HAZARD RATINGS

HEALTH = 1	**0 = NONE**
FIRE = 1	**1 = SLIGHT**
REACTIVITY = 0	**2 = MODERATE**
	3 = HIGH
	4 = EXTREME

PERSONAL PROTECTION INDEX = B

This information is, to the best of our knowledge and belief, accurate and reliable as of the date completed. However no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the completeness and suitability of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information, nor do we offer any warranty against patent infringement.

MATERIAL SAFETY DATA SHEET

SECTION 1 -- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME	Pure Bright Germicidal Bleach	PACK	6 / 1 gal.
PRODUCT CODE	11133575041		

ISSUE DATE	30-04-04

EMERGENCY TELEPHONE NUMBERS

MANUFACTURER	**KIK International**	**Transportation: (800) 424-9300 ***
STREET ADDRESS	**2921 Corder Street**	*** For spill, leak, fire or transport accident emergencies.**
CITY, STATE, ZIP	**Houston, Texas 77054**	**Product Information: (713) 747-8710**

SECTION 2 -- COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENT				EXPOSURE LIMITS		
* -- (see note below)		CAS No.	% by wt.	OSHA PEL	ACGIH TLV	NIOSH REL
	Sodium hypochlorite	7681-52-9	5.25 - 5.45	None (see next entry)	None (see next entry)	None (see next entry)

*** -- Asterisked ingredients are those considered hazardous according to the criteria of 29CFR 1910.1200. Other ingredients are listed for informational purposes to assist emergency medical response personnel.**

SECTION 3 -- HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW	**Corrosive; may cause severe skin and eye irritation or chemical burns to broken skin. Vapors extremely irritating to eyes and respiratory tract. Harmful and potentially fatal if swallowed.**
POTENTIAL HEALTH EFFECTS	
INGESTION	Can cause corrosion of mucous membranes, severe esophageal burns and perforation of esophagus or stomach.
INHALATION	Inhalation of vapors can cause bronchial irritation, coughing, difficulty in breathing, nausea and pulmonary edema.
EYE CONTACT	Corrosive to the eyes; may cause severe and permanent damage.
SKIN CONTACT	Severe irritant; contact can produce blistering and eczema.

SECTION 4 -- FIRST AID MEASURES

INGESTION	If swallowed, DO NOT induce vomiting. Immediately drink a large quantity of water. Do not use acidic antidotes or sodium bicarbonate (baking soda). **Call a physician or poison control center immediately.**
INHALATION	If exposed to excessive vapor levels, remove to fresh air and seek medical attention if cough or other symptoms develop.
EYE CONTACT	Immediately flush eye with plenty of cool, running water. Remove contact lenses if applicable, and continue flushing for at least 15 minutes. **Get medical attention immediately.**
SKIN CONTACT	Flush affected skin area with copious amounts of water and wash with soap and water. If irritation develops or persists, get medical attention. Remove clothing and wash before reuse.
NOTE TO PHYSICIAN	Information pertaining to ingestion toxicology, therapy, symptomatology and treatment can be found in Clinical Toxicology of Commercial Products, authored by Gosselin, Smith and Hodge and published by Williams & Wilkins, Baltimore, Maryland. **See listing for Hypochlorite in Therapeutics Index, Section III.**

SECTION 5 -- FIRE FIGHTING MEASURES

FLASH POINT / METHOD	None / N.A.	FLAMMABLE LIMITS	Not flammable or combustible
EXTINGUISHING MEDIA	If involved in a fire, alcohol foam, carbon dioxide, dry chemical or water fog. Use extinguishing media that is appropriate for surrounding fire.		
SPECIAL FIRE FIGHTING PROCEDURES	Avoid fumes from spilled or exposed liquid. Firefighters should wear full protective clothing and OSHA/NIOSH self-contained breathing apparatus. Cool fire-exposed containers with water spray from a safe distance.		
FIRE AND EXPLOSION HAZARDS	Sodium hypochlorite bleach is a strong oxidizing agent and decomposes when heated. Decomposition products may cause containers to explode. Vigorous reactions may occur with organic materials or oxidizable materials, causing fires.		

SECTION 6 -- ACCIDENTAL RELEASE MEASURES

RESPONSE TO SPILLS	Small spills: Dilute product by flooding area with large quantity of water and flush to sanitary sewer. Large spills: Contain run-off by diking with suitable material. Soak up liquid on inert absorbent and transfer to approved container. Prevent spill from entering sewers or waterways.

SECTION 7 -- HANDLING AND STORAGE

HANDLING PRECAUTIONS	Wash after handling and before eating. Use personal protective equipment and wear suitable chemical-resistant clothing. Keep container tightly closed when not in use. Follow label directions closely.
STORAGE PRECAUTIONS	Store upright in a cool (below 85 F), dry, well-ventilated area. Keep away from heat or direct sunlight. Separate from incompatible materials, such as acids, ammonia, soap-based products or organic materials. Protect containers from physical damage. Keep away from children.

SECTION 8 -- EXPOSURE CONTROLS / PERSONAL PROTECTION

HYGIENIC PRACTICES	**Avoid breathing vapors.** Do not store near food stuffs, water or feed. Protect eyes, skin and clothing from contact with this product.
ENGINEERING CONTROLS	Use local ventilation to remove vapors at the source. **Facilities using this product must be equipped with an eyewash station.**

PERSONAL PROTECTIVE EQUIPMENT

X	**RESPIRATOR**	Not normally necessary; use NIOSH approved respirator for concentrated vapors
X	**GOGGLES / FACE SHIELD**	**Required**; goggles should be chemical splash type. Face shield also helpful.
X	**APRON**	Recommended to avoid skin contact and protect clothing from damage
X	**GLOVES**	**Required**; use impervious PVC or Neoprene with long gauntlet
X	**BOOTS**	Recommended to protect shoes and feet when using product for floor cleaning

SECTION 9 -- PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Clear pale yellow liquid	BOILING POINT	212 deg F
ODOR	Chlorine	FREEZING POINT	28 deg F
pH	12.0 - 12.8	VAPOR PRESSURE	17.5 mm Hg @ 20 C
SPECIFIC GRAVITY	1.080	VAPOR DENSITY	Not applicable
SOLUBILITY IN WATER	Complete	EVAPORATION RATE	Not applicable

SECTION 10 -- STABILITY AND REACTIVITY

CHEMICAL STABILITY		**STABLE**	X		**UNSTABLE**	
CONDITIONS TO AVOID	Heat or direct sunlight; temperatures above 85 F. **Do not mix with solutions containing ammonia.**					
INCOMPATIBILITY	Acids, ammonia, ether, urea, oxidizable materials, soaps, oils, greases, phenolic disinfectants and metals (including nickel, copper, tin, aluminum and iron.					
HAZARDOUS PRODUCTS OF DECOMPOSITION	Chlorine gas -- from contact with highly acidic materials. Chloramines -- from contact with ammonia. Polychlorinated phenols -- from contact with phenolic disinfectants.					
POLYMERIZATION		**WILL NOT OCCUR**	X		**MAY OCCUR**	
CONDITIONS TO AVOID	Not applicable					

SECTION 11 -- TOXICOLOGICAL INFORMATION

CARCINOGENICITY

	THIS PRODUCT CONTAINS A KNOWN OR SUSPECTED CARCINOGEN
X	**THIS PRODUCT DOES NOT CONTAIN ANY KNOWN OR ANTICIPATED CARCINOGENS ACCORDING TO THE CRITERIA OF THE NTP ANNUAL REPORT ON CARCINOGENS AND OSHA 29 CFR 1910, Z**

OTHER EFFECTS

ACUTE	Toxicity arises from corrosive activity; stems from oxidizing potency, a function of concentration
CHRONIC	Not determined

SECTION 12 -- ECOLOGICAL INFORMATION

BIODEGRADABILITY		**CONSIDERED BIODEGRADABLE**	X		**NOT BIODEGRADABLE**	
BOD / COD VALUE	Not established					
ECOTOXICITY	This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, ocean, or public waters unless this product is specifically identified and addressed in an NPDS permit. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact State Water Board or Regional Office of the EPA.					

SECTION 13 -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD	If in accordance with an NPDES permit or approved by local sewage treatment plant authority, small amounts may be flushed to a sanitary sewer with plenty of water. Large amounts of unused product must be disposed of as hazardous waste at an approved hazardous waste management facility.								
RCRA CLASSIFICATION	Hazardous, corrosive D002 (if pH is equal to or greater than 12.5)								
RECYCLE CONTAINER		**YES**	X		**CODE**	2 – HDPE		**NO**	

SECTION 14 -- TRANSPORT INFORMATION

DOT CLASSIFICATION		**HAZARDOUS**			**NOT HAZARDOUS**	X
DESCRIPTION	Non-Regulated					
DOT HM CODE	None					

SECTION 15 -- REGULATORY INFORMATION

REGULATORY STATUS

X	**EPA REGISTERED (UNDER FIFRA)**	70271-3
	FDA REGULATED	
	KOSHER	
X	**SARA TITLE III MATERIAL**	Sodium hydroxide & Sodium hypochlorite **(Section 304)**
	USDA AUTHORIZED	
X	**CANADA WHMIS**	Controlled Product, Class E - Corrosive Material

SECTION 16 -- OTHER INFORMATION

NFPA CLASSIFICATION

2	**BLUE**	HEALTH HAZARD
0	**RED**	FLAMMABILITY
1	**YELLOW**	REACTIVITY
OX	**WHITE**	SPECIAL HAZARD

Information contained in this MSDS refers only to the specific material designated and does not relate to any process or use involving other materials. This information is based on data believed to be reliable, and the Product is intended to be used in a manner that is customary and reasonably foreseeable. Since actual use and handling are beyond our control, no warranty, express or implied, is made and no liability is assumed by KIK International in connection with the use of this information.

PURELL® Advanced Instant Hand Sanitizer

Version	Revision Date:	MSDS Number:	Date of last issue: 12/12/2014
1.1	02/10/2015	36762-00002	Date of first issue: 12/12/2014

SECTION 1. IDENTIFICATION

Product name : PURELL® Advanced Instant Hand Sanitizer

Manufacturer or supplier's details

Company name of supplier : GOJO Industries, Inc.

Address : One GOJO Plaza, Suite 500
Akron OH 44311

Telephone : 1 (330) 255-6000

Emergency telephone : 1-800-424-9300 CHEMTREC

Recommended use of the chemical and restrictions on use

Recommended use : Hand Sanitizer

Restrictions on use : This is a personal care or cosmetic product that is safe for consumers and other users under normal and reasonably foreseeable use. Cosmetics and consumer products, specifically defined by regulations around the world, are exempt from the requirement of an SDS for the consumer. While this material is not considered hazardous, this SDS contains valuable information critical to the safe handling and proper use of the product for industrial workplace conditions as well as unusual and unintended exposures such as large spills. This SDS should be retained and available for employees and other users of this product. For specific intended-use guidance, please refer to the information provided on the package or instruction sheet.

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids : Category 3

Eye irritation : Category 2A

GHS Label element

Hazard pictograms :

Signal Word : Warning

Hazard Statements : H226 Flammable liquid and vapor.
H319 Causes serious eye irritation.

Precautionary Statements : **Prevention:**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 Keep container tightly closed.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ eye protection/ face protection.
Response:
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
Storage:
P403 + P235 Store in a well-ventilated place. Keep cool.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

Vapors may form explosive mixture with air.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients

Chemical Name	CAS-No.	Concentration (%)
Ethanol	64-17-5	>= 50 - < 70
Propan-2-ol	67-63-0	>= 1 - < 5

SECTION 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air.
Get medical attention if symptoms occur.

In case of skin contact : Wash with water and soap as a precaution.
Get medical attention if symptoms occur.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
If easy to do, remove contact lens, if worn.

		Get medical attention.
If swallowed	:	If swallowed, DO NOT induce vomiting. Get medical attention if symptoms occur. Rinse mouth thoroughly with water.
Most important symptoms and effects, both acute and delayed	:	Causes serious eye irritation.
Protection of first-aiders	:	First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists.
Notes to physician	:	Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Water spray Alcohol-resistant foam Dry chemical Carbon dioxide (CO2)
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during fire fighting	:	Do not use a solid water stream as it may scatter and spread fire. Flash back possible over considerable distance. Vapors may form explosive mixtures with air. Exposure to combustion products may be a hazard to health.
Hazardous combustion products	:	Carbon oxides
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.
Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Remove all sources of ignition. Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.
Environmental precautions	:	Discharge into the environment must be avoided.

Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g. by containment or oil barriers).
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up : Non-sparking tools should be used.
Soak up with inert absorbent material.
Suppress (knock down) gases/vapors/mists with a water spray jet.
For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use with local exhaust ventilation.
Use only in an area equipped with explosion proof exhaust ventilation.

Advice on safe handling : Do not breathe vapors or spray mist.
Do not swallow.
Do not get in eyes.
Avoid prolonged or repeated contact with skin.
Handle in accordance with good industrial hygiene and safety practice.
Non-sparking tools should be used.
Keep container tightly closed.
Keep away from heat and sources of ignition.
Take precautionary measures against static discharges.
Take care to prevent spills, waste and minimize release to the environment.

Conditions for safe storage : Keep in properly labeled containers.
Keep tightly closed.
Keep in a cool, well-ventilated place.
Store in accordance with the particular national regulations.
Keep away from heat and sources of ignition.

Materials to avoid : Do not store with the following product types:
Strong oxidizing agents

Organic peroxides
Flammable solids
Pyrophoric liquids
Pyrophoric solids
Self-heating substances and mixtures
Substances and mixtures which in contact with water emit flammable gases
Explosives
Gases

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Ethanol	64-17-5	TWA	1,000 ppm 1,900 mg/m3	NIOSH REL
		TWA	1,000 ppm 1,900 mg/m3	OSHA Z-1
		STEL	1,000 ppm	ACGIH
Propan-2-ol	67-63-0	TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH
		TWA	400 ppm 980 mg/m3	NIOSH REL
		ST	500 ppm 1,225 mg/m3	NIOSH REL
		TWA	400 ppm 980 mg/m3	OSHA Z-1

Biological occupational exposure limits

Ingredients	CAS-No.	Control parameters	Biological specimen	Sam-pling time	Permissible concentratio n	Basis
Propan-2-ol	67-63-0	Acetone	Urine	End of shift at end of work-week	40 mg/l	ACGIH BEI

Engineering measures : Minimize workplace exposure concentrations.
Use only in an area equipped with explosion proof exhaust ventilation.
Use with local exhaust ventilation.

Personal protective equipment

Respiratory protection : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and

use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Hand protection

Material : Impervious gloves

Material : Flame retardant gloves

Remarks : Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Eye protection : Wear the following personal protective equipment:
Safety goggles

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
Wear the following personal protective equipment:
Flame retardant antistatic protective clothing.
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

Hygiene measures : Ensure that eye flushing systems and safety showers are located close to the working place.
When using do not eat, drink or smoke.
Wash contaminated clothing before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	gel
Color	:	clear, light blue
Odor	:	fruity
Odor Threshold	:	No data available
pH	:	6.5 - 8.5
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	73 °C

Flash point	:	25 °C
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Density	:	0.881 g/cm3
Solubility(ies) Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	Not applicable
Autoignition temperature	:	No data available
Decomposition temperature	:	The substance or mixture is not classified self-reactive.
Viscosity Viscosity, kinematic	:	1,000 - 17,000 mm2/s (20 °C)
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Flammable liquid and vapor. Vapors may form explosive mixture with air. Can react with strong oxidizing agents.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure
Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Ingredients:

Ethanol:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 124.7 mg/l Exposure time: 4 h Test atmosphere: vapor

Propan-2-ol:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 72.6 mg/l Exposure time: 4 h Test atmosphere: vapor
Acute dermal toxicity	:	LD50 (Rat): > 5,000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Product:

Result: No skin irritation

Ingredients:

Ethanol:
Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Propan-2-ol:
Species: Rabbit
Result: No skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Ingredients:

Ethanol:
Species: Rabbit
Result: Irritation to eyes, reversing within 21 days
Method: OECD Test Guideline 405

Propan-2-ol:
Species: Rabbit
Result: Irritation to eyes, reversing within 21 days

Respiratory or skin sensitization

Skin sensitization: Not classified based on available information.
Respiratory sensitization: Not classified based on available information.

Product:

Assessment: Does not cause skin sensitization.

Ingredients:

Ethanol:
Test Type: Local lymph node assay (LLNA)
Routes of exposure: Skin contact
Species: Mouse
Result: negative

Propan-2-ol:
Test Type: Buehler Test
Routes of exposure: Skin contact
Species: Guinea pig
Method: OECD Test Guideline 406
Result: negative

Germ cell mutagenicity

Not classified based on available information.

Ingredients:

Ethanol:

Genotoxicity in vitro	:	Test Type: In vitro mammalian cell gene mutation test Result: negative
Genotoxicity in vivo	:	Test Type: Rodent dominant lethal test (germ cell) (in vivo) Species: Mouse Application Route: Ingestion Result: negative

Propan-2-ol:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Result: negative
Genotoxicity in vivo	:	Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse Application Route: Intraperitoneal injection Result: negative

Carcinogenicity

Not classified based on available information.

Ingredients:

Propan-2-ol:
Species: Rat
Application Route: inhalation (vapor)
Exposure time: 104 weeks
Method: OECD Test Guideline 451
Result: negative

IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

Ingredients:

Ethanol:

Effects on fertility	:	Test Type: Two-generation reproduction toxicity study Species: Mouse Application Route: Ingestion Method: OECD Test Guideline 416 Result: negative

Propan-2-ol:

Effects on fertility	:	Test Type: Two-generation reproduction toxicity study Species: Rat Application Route: Ingestion Result: negative
Effects on fetal development	:	Test Type: Embryo-fetal development Species: Rat Application Route: Ingestion Result: negative

STOT-single exposure

Not classified based on available information.

Ingredients:

Propan-2-ol:
Assessment: May cause drowsiness or dizziness.

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

Ingredients:

Ethanol:
Species: Rat
NOAEL: 2,400 mg/kg
Application Route: Ingestion
Exposure time: 2 y

Propan-2-ol:
Species: Rat
NOAEL: 5000 ppm
Application Route: inhalation (vapor)
Exposure time: 104 w
Method: OECD Test Guideline 413

Aspiration toxicity

Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:

Ethanol:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): > 1,000 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 1,000 mg/l Exposure time: 48 h
Toxicity to algae	:	EC50 (Chlorella vulgaris (Fresh water algae)): 275 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 9.6 mg/l Exposure time: 9 d
Toxicity to bacteria	:	EC50 (Photobacterium phosphoreum): 32.1 mg/l Exposure time: 0.25 h

Propan-2-ol:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 10,000 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 10,000 mg/l Exposure time: 24 h
Toxicity to algae	:	ErC50 (Scenedesmus quadricauda (Green algae)): > 1,800 mg/l

Exposure time: 8 d

Toxicity to bacteria : EC50 (Pseudomonas putida): > 1,050 mg/l
Exposure time: 16 h

Persistence and degradability

Ingredients:

Ethanol:
Biodegradability : Result: Readily biodegradable.
Biodegradation: 84 %
Exposure time: 20 d

Propan-2-ol:
Biodegradability : Result: rapidly degradable

Bioaccumulative potential

Ingredients:

Ethanol:
Partition coefficient: n-octanol/water : log Pow: -0.35

Propan-2-ol:
Partition coefficient: n-octanol/water : log Pow: 0.05

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International Regulation

UNRTDG
UN number : UN 1987
Proper shipping name : ALCOHOLS, N.O.S.

		(Ethanol, Propan-2-ol)
Class	:	3
Packing group	:	III
Labels	:	3

IATA-DGR

UN/ID No.	:	UN 1987
Proper shipping name	:	Alcohols, n.o.s. (Ethanol, Propan-2-ol)
Class	:	3
Packing group	:	III
Labels	:	Flammable Liquids
Packing instruction (cargo aircraft)	:	366
Packing instruction (passenger aircraft)	:	355

IMDG-Code

UN number	:	UN 1987
Proper shipping name	:	ALCOHOLS, N.O.S. (Ethanol, Propan-2-ol)
Class	:	3
Packing group	:	III
Labels	:	3
EmS Code	:	F-E, S-D
Marine pollutant	:	no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR

UN/ID/NA number	:	UN 1987
Proper shipping name	:	ALCOHOLS, N.O.S.
Class	:	3
Packing group	:	III
Labels	:	FLAMMABLE LIQUID
ERG Code	:	127
Marine pollutant	:	no

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Fire Hazard

Acute Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

Propan-2-ol	67-63-0	3.4086 %

US State Regulations

Pennsylvania Right To Know

Ethanol	64-17-5	50 - 70 %
Water	7732-18-5	30 - 50 %
Propan-2-ol	67-63-0	1 - 5 %

New Jersey Right To Know

Ethanol	64-17-5	50 - 70 %
Water	7732-18-5	30 - 50 %
Propan-2-ol	67-63-0	1 - 5 %

California Prop 65 This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

The ingredients of this product are reported in the following inventories:

REACH : All ingredients (pre-)registered or exempt.

TSCA : All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

DSL : All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL).

AICS : All ingredients listed or exempt.

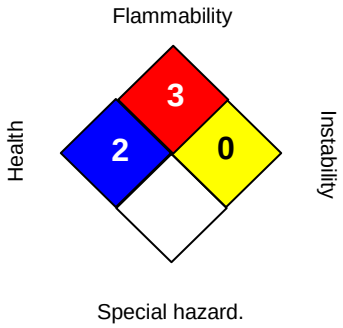
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), NECSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	2
FLAMMABILITY	3
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	:	ACGIH - Biological Exposure Indices (BEI)
NIOSH REL	:	USA. NIOSH Recommended Exposure Limits
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
NIOSH REL / TWA	:	Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST	:	STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
OSHA Z-1 / TWA	:	8-hour time weighted average
Sources of key data used to compile the Material Safety Data Sheet	:	Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/
Revision Date	:	02/10/2015

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

US / Z8

Date: 26 October 2011
Supercedes: 15 June 2011

MATERIAL SAFETY DATA SHEET

IN CASE OF EMERGENCY CALL CHEMTREC AT 1-800-424-9300

1. PRODUCT IDENTIFICATION AND COMPANY IDENTIFICATION:

Product Name: **PURELL® Advanced Instant Hand Sanitizer Foam**

Company Name & Address: GOJO Industries, Inc.
One GOJO Plaza, Suite 500
Akron, OH 44311

Emergency Phone: **1-800-424-9300 CHEMTREC**
Non-Emergency Phone: (330) 255-6000
MSDS Request Phone: (330) 255-6000 x8804

2. INFORMATION ON INGREDIENTS:

HAZARDOUS INGREDIENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	% RANGE
Ethyl Alcohol	64-17-5	1000 ppm	1000 ppm	70
Isopropanol	67-63-0	400 ppm	200 ppm	<5

Other ingredient(s) with notification requirements:	CAS NUMBER	List
Ethyl Alcohol	64-17-5	MA 1; NJ 1S; PA 1; CN 2
Isopropanol	67-63-0	MA 1; NJ 1S; PA; CN

3. HAZARDS IDENTIFICATION:

EMERGENCY OVERVIEW

When used according to instructions, the product applicable to this MSDS is safe and presents no immediate or long-term health hazard. However, abnormal entry routes, such as gross ingestion, may require immediate medical attention.

Potential Health Effects:

HMIS: Health 2 Flammability 3 Reactivity 0 Personal Protection None

Eye Contact: May cause eye irritation.
Skin Contact: No irritation or reaction expected.
Inhalation: Not applicable.
Ingestion: May cause upset stomach, nausea (Abnormal entry route).
Carcinogenicity: Not listed as a carcinogen by NTP, IARC, OSHA or ACGIH.

4. FIRST AID MEASURES:

Eye Contact: Do not rub eyes. Flush eyes thoroughly with water for 15 minutes. If condition worsens or irritation persists, contact physician.
Skin Contact: Not applicable.
Inhalation: Not applicable.
Ingestion: Do not induce vomiting. Contact a physician or Poison Control Center.

5. FIRE FIGHTING MEASURES:

NFPA: Health __2__ Fire __3__ Reactivity __0__

Flashpoint °F/°C (PMCC method): 80.6°F/ 27°C
Unusual Fire and Explosion Hazards: Product is flammable due to alcohol content.
Special Fire Fighting Procedures: None known.

Extinguishing Media: __X__ Water Fog __X__ Alcohol Foam __X__ CO_2 __X__ Dry Chemical ____ Other

6. ACCIDENTAL RELEASE MEASURES:

Avoid contact with ignition sources since product is flammable. Absorb onto inert material and dispose in appropriate manner. Water clean up and rinse. CAUTION – WILL CAUSE SLIPPERY SURFACES.

7. HANDLING AND STORAGE:

Keep away from fire or flame. Store at normal room temperature away from reach of small children. Keep containers sealed. Use older containers first. Avoid freezing conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Eye Protection:	None required under normal conditions.
Skin Protection:	None required under normal conditions.
Respiratory Protection:	None required under normal conditions.
Ventilation:	None required under normal conditions.
Protective Equipment or Clothing:	None required under normal conditions.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance and Odor	Clear liquid, fruity fragrance
pH (undiluted):	6 - 9
VOC , %:	< 75

10. STABILITY AND REACTIVITY:

Stable/Non reactive product. Avoid ignition sources.

11. TOXICOLOGICAL INFORMATION:

No acute or chronic toxic effects expected when used according to directions.

12. ECOLOGICAL CONSIDERATIONS:

No ecological or special considerations when used according to directions. Not considered environmentally harmful from normal dilution, expected usage and typical drainage to sewers, septic systems and treatment plants.

13. DISPOSAL CONSIDERATIONS:

Characteristic hazardous waste-flammable liquid. Dispose according to local, state and Federal regulations.

14. TRANSPORT INFORMATION:

Hazardous by transport regulations. When transported by ground modes in the U.S., this product is typically shipped as Consumer Commodity ORM-D. When transported by water, this product is typically shipped as a UN1170 in Limited Quantities. Refer to all current transport regulations for exact requirements.

15. REGULATORY AND OTHER INFORMATION:

TSCA: All ingredients are listed or exempt per reference 15 USC 2602 (2)(B)(vi).

Complies with current FDA regulations for cosmetic and/or over-the-counter drug products.

WHMIS: Exempt under the Food and Drug Act

Notice: The information herein is based on data considered to be accurate as of the date of preparation of this material safety data sheet. However, no warranty or representation, expressed or implied, is made as to the accuracy or completeness of the foregoing data and safety information. The user assumes all liability for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product.

Date: 15 October 2007
Supercedes: 15 November 2004

MATERIAL SAFETY DATA SHEET

IN CASE OF EMERGENCY CALL CHEMTREC AT 1-800-424-9300

1. PRODUCT IDENTIFICATION AND COMPANY IDENTIFICATION:

Product Name: **PURELL® FOAMING HAND SANITIZER**

Company Name & Address: GOJO Industries, Inc.
One GOJO Plaza, Suite 500
Akron, OH 44311

Emergency Phone: 1-800-424-9300 CHEMTREC

Non-Emergency Phone: (330) 255-6000

MSDS Request Phone: (330) 255-6000 x8804

2. INFORMATION ON INGREDIENTS:

HAZARDOUS INGREDIENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	% RANGE
Ethyl Alcohol	64-17-5	1000 ppm	1000 ppm	62
Isobutane	68476-85-7	1000 ppm	1000 ppm	≤5
Propane	74-98-6	1000 ppm	2500 ppm	≤5

Other ingredient(s) with notification requirements:	CAS NUMBER	List
Ethyl Alcohol	64-17-5	MA 1; NJ 1S; PA 1; CN 2
Isobutane	68476-85-7	MA 1; NJ 1S; CN 1
Propane	74-98-6	MA 1; NJ 1S; PA 1
Hydrofluorocarbon 152a	75-37-6	MA 1

3. HAZARDS IDENTIFICATION:

EMERGENCY OVERVIEW

When used according to instructions, the product applicable to this MSDS is safe and presents no immediate or long-term health hazard. However, abnormal entry routes, such as gross ingestion, may require immediate medical attention.

Potential Health Effects:

HMIS: Health 1 Flammability 3 Reactivity 0 Personal Protection None

Eye Contact: May cause mild eye irritation.
Skin Contact: No irritation or reaction expected.
Inhalation: May produce anesthetic effects and feeling of euphoria. Prolonged overexposure can cause rapid breathing, headache, dizziness, narcosis, unconsciousness, and death from asphyxiation, depending on concentration and time of exposure.
Ingestion: May cause nausea and vomiting.
Carcinogenicity: Not listed as a carcinogen by NTP, IARC, OSHA or ACGIH.

4. FIRST AID MEASURES:

Eye Contact: Do not rub eyes. Flush eyes thoroughly with water for at least 15 minutes. If condition worsens or irritation persists, contact a physician.
Skin Contact: Wash with soap and water.
Inhalation: Remove to fresh air if necessary.
Ingestion: Induce vomiting and contact a physician or Poison Control Center if necessary.

Purell is a trademark of Warner-Lambert Company LLC

5. FIRE FIGHTING MEASURES:

NFPA:	Health 0 Fire 3 Reactivity 0
Flashpoint °F/°C (PMCC method):	Not Determined
Unusual Fire and Explosion Hazards:	Product is flammable due to alcohol content. Prolonged exposure to temperatures above 120°F may cause cans to burst.
Special Fire Fighting Procedures:	None known.
Extinguishing Media:	X Water Fog X Alcohol Foam X CO_2 ____ Dry Chemical ____ Other

6. ACCIDENTAL RELEASE MEASURES:

Avoid contact with ignition sources since product is flammable. Pick up excess with absorbent material and discard in accordance with regulations. Flush surfaces with water. CAUTION - WILL CAUSE SLIPPERY SURFACES. Use proper personal protective equipment/s.

7. HANDLING AND STORAGE:

Contents under pressure. Do not store below 32°F or above 120°F. Do not puncture or incinerate containers. Do not use or store near heat, sparks or open flame. Keep this and all chemicals out of the reach of children.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Eye Protection:	Not normally required.
Skin Protection:	Not normally required.
Respiratory Protection:	Not normally required.
Ventilation:	Local Exhaust Rate: Recommended Special: none Mechanical (General): Acceptable
Protective Equipment or Clothing:	None.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance and Odor	White foam, mild alcohol odor
pH (undiluted):	7.0 – 8.0
VOC , %:	62

10. STABILITY AND REACTIVITY:

Stable/Non reactive product. Avoid ignition sources and temperatures above 120°F.

11. TOXICOLOGICAL INFORMATION:

No acute or chronic toxic effects expected when used according to directions.

12. ECOLOGICAL CONSIDERATIONS:

No ecological or special considerations when used according to directions. Not considered environmentally harmful from normal dilution, expected usage and typical drainage to sewers, septic systems and treatment plants.

13. DISPOSAL CONSIDERATIONS:

Characteristic hazardous waste-flammable liquid. Dispose according to Local, State and Federal regulations.

14. TRANSPORT INFORMATION:

Hazardous by transport regulations. When transported by Ground and Rail, this product typically is shipped as Consumer Commodity ORM-D. When transported by air, this product is typically shipped as Consumer Commodity or Alcohols N.O.S. depending on package size. When transported by ocean, this product is typically shipped as Limited Quantities. Refer to current regulations for exact requirements.

15. REGULATORY AND OTHER INFORMATION:

TSCA: All ingredients are listed or exempt per reference 15 USC 2602 (2)(B)(iv).

Complies with current FDA regulations for cosmetic and/or over-the-counter drug products.

Notice: The information herein is based on data considered to be accurate as of the date of preparation of this material safety data sheet. However, no warranty or representation, expressed or implied, is made as to the accuracy or completeness of the foregoing data and safety information. The user assumes all liability for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product.

Date: 15 October 2007
Supercedes: 15 November 2004

MATERIAL SAFETY DATA SHEET

IN CASE OF EMERGENCY CALL CHEMTREC AT 1-800-424-9300

1. PRODUCT IDENTIFICATION AND COMPANY IDENTIFICATION:

Product Name: **PURELL® INSTANT HAND SANITIZER**

Company Name & Address: GOJO Industries, Inc.
One GOJO Plaza, Suite 500
Akron, OH 44311

Emergency Phone: **1-800-424-9300 CHEMTREC**
Non-Emergency Phone: (330) 255-6000
MSDS Request Phone: (330) 255-6000 x8804

2. INFORMATION ON INGREDIENTS:

HAZARDOUS INGREDIENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	% RANGE
Ethyl Alcohol	64-17-5	1000 ppm	1000 ppm	62
Isopropanol	67-63-0	400 ppm	400 ppm	<5

Other ingredient(s) with notification requirements:	CAS NUMBER	List
Ethyl Alcohol	64-17-5	MA 1; NJ 1S; PA 1; CN 2
Isopropanol	67-63-0	MA 1; NJ 1S; CN 1

3. HAZARDS IDENTIFICATION:

EMERGENCY OVERVIEW

When used according to instructions, the product applicable to this MSDS is safe and presents no immediate or long-term health hazard. However, abnormal entry routes, such as gross ingestion, may require immediate medical attention.

Potential Health Effects:

HMIS: Health 1 Flammability 3 Reactivity 0 Personal Protection None

Eye Contact: May cause eye irritation.
Skin Contact: No irritation or reaction expected.
Inhalation: Not applicable.
Ingestion: May cause upset stomach, nausea (Abnormal entry route).
Carcinogenicity: Not listed as a carcinogen by NTP, IARC, OSHA or ACGIH.

4. FIRST AID MEASURES:

Eye Contact: Do not rub eyes. Flush eyes thoroughly with water for 15 minutes. If condition worsens or irritation persists, contact physician.
Skin Contact: Not applicable.
Inhalation: Not applicable.
Ingestion: Do not induce vomiting. Contact a physician or Poison Control Center.

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5. FIRE FIGHTING MEASURES:

NFPA:	Health __0__ Fire __3__ Reactivity __0__
Flashpoint °F/°C (PMCC method):	86.36°F/30.2°C
Unusual Fire and Explosion Hazards:	Product is flammable due to alcohol content.
Special Fire Fighting Procedures:	None known.
Extinguishing Media:	__X__ Water Fog __X__ Alcohol Foam __X__ CO_2 __X__ Dry Chemical ____ Other

6. ACCIDENTAL RELEASE MEASURES:

Avoid contact with ignition sources since product is flammable. Absorb onto inert material and dispose in appropriate manner. Water clean up and rinse. CAUTION – WILL CAUSE SLIPPERY SURFACES.

7. HANDLING AND STORAGE:

Keep away from fire or flame. Store at normal room temperature away from reach of small children. Keep containers sealed. Use older containers first. Avoid freezing conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Eye Protection:	None required under normal conditions.
Skin Protection:	None required under normal conditions.
Respiratory Protection:	None required under normal conditions.
Ventilation:	None required under normal conditions.
Protective Equipment or Clothing:	None required under normal conditions.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance and Odor	Clear liquid, citrus fragrance
pH (undiluted):	4.5 – 9.5
VOC , %:	65

10. STABILITY AND REACTIVITY:

Stable/Non reactive product. Avoid ignition sources.

11. TOXICOLOGICAL INFORMATION:

No acute or chronic toxic effects expected when used according to directions.

12. ECOLOGICAL CONSIDERATIONS:

No ecological or special considerations when used according to directions. Not considered environmentally harmful from normal dilution, expected usage and typical drainage to sewers, septic systems and treatment plants.

13. DISPOSAL CONSIDERATIONS:

Characteristic hazardous waste-flammable liquid. Dispose according to local, state and Federal regulations.

14. TRANSPORT INFORMATION:

Hazardous by transport regulations. When transported by Ground and Rail, this product typically is shipped as Consumer Commodity ORM-D. When transported by air, this product is typically shipped as Consumer Commodity or Alcohols N.O.S. depending on package size. When transported by ocean, this product is typically shipped as Limited Quantities. Refer to current regulations for exact requirements.

15. REGULATORY AND OTHER INFORMATION:

TSCA: All ingredients are listed or exempt per reference 15 USC 2602 (2)(B)(iv).

Complies with current FDA regulations for cosmetic and/or over-the-counter drug products.

Notice: The information herein is based on data considered to be accurate as of the date of preparation of this material safety data sheet. However, no warranty or representation, expressed or implied, is made as to the accuracy or completeness of the foregoing data and safety information. The user assumes all liability for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product.

Date: 15 October 2007
Supercedes: 26 January 2005

MATERIAL SAFETY DATA SHEET

IN CASE OF EMERGENCY CALL CHEMTREC AT 1-800-424-9300

1. PRODUCT IDENTIFICATION AND COMPANY IDENTIFICATION:

Product Name: **PURELL® SANITIZING WIPES**

Company Name & Address: GOJO Industries, Inc.
One GOJO Plaza, Suite 500
Akron, OH 44311

Emergency Phone: **1-800-424-9300 CHEMTREC**
Non-Emergency Phone: (330) 255-6000
MSDS Request Phone: (330) 255-6000 x8804

2. INFORMATION ON INGREDIENTS:

HAZARDOUS INGREDIENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	% RANGE
Ethyl Alcohol	64-17-5	1,000 ppm	1,000 ppm	<20
Isopropanol	67-63-0	TWA: 400 ppm	TWA: 400 ppm	<5

Other ingredient(s) with notification requirements:	CAS NUMBER	List
Propylene Glycol	57-55-6	PA 1; CN 1

3. HAZARDS IDENTIFICATION:

EMERGENCY OVERVIEW

When used according to instructions, the product applicable to this MSDS is safe and presents no immediate or long-term health hazard. However, abnormal entry routes, such as gross ingestion, may require immediate medical attention.

Potential Health Effects:

HMIS: Health 1 Flammability 1 Reactivity 0 Personal Protection None

Eye Contact: May cause eye irritation.
Skin Contact: No irritation or reaction expected.
Inhalation: Not applicable.
Ingestion: May cause upset stomach, nausea (Abnormal entry route).
Carcinogenicity: Not listed as a carcinogen by NTP, IARC, OSHA or ACGIH.

4. FIRST AID MEASURES:

Eye Contact: Do not rub eyes. Flush eyes thoroughly with water for 15 minutes. If condition worsens or irritation persists, contact physician.
Skin Contact: Not applicable.
Inhalation: Not applicable.
Ingestion: Do not induce vomiting. Contact a physician or Poison Control Center.

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5. FIRE FIGHTING MEASURES:

NFPA: Health __0__ Fire __1__ Reactivity __0__

Flashpoint °F/°C (PMCC method): 104°F/ 40°C (liquid)
Unusual Fire and Explosion Hazards: Product is flammable due to alcohol content.
Special Fire Fighting Procedures: None known.
Extinguishing Media: __X__ Water Fog __X__ Alcohol Foam __X__ CO_2 __X__ Dry Chemical ____ Other

6. ACCIDENTAL RELEASE MEASURES:

Avoid contact with ignition sources since product is flammable. Absorb onto inert material and dispose in appropriate manner. Water clean up and rinse. CAUTION – WILL CAUSE SLIPPERY SURFACES.

7. HANDLING AND STORAGE:

Keep away from fire or flame. Store at normal room temperature away from reach of small children. Keep containers sealed. Use older containers first. Avoid freezing conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Eye Protection:	None required under normal conditions.
Skin Protection:	None required under normal conditions.
Respiratory Protection:	None required under normal conditions.
Ventilation:	None required under normal conditions.
Protective Equipment or Clothing:	None required under normal conditions.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance and Odor	Clear colorless liquid, lemon odor, impregnated towel
pH (undiluted):	4.0 – 7.5
VOC , %:	15

10. STABILITY AND REACTIVITY:

Stable/Non reactive product. Avoid ignition sources.

11. TOXICOLOGICAL INFORMATION:

No acute or chronic toxic effects expected when used according to directions.

12. ECOLOGICAL CONSIDERATIONS:

No ecological or special considerations when used according to directions. Not considered environmentally harmful from normal dilution, expected usage and typical drainage to sewers, septic systems and treatment plants.

13. DISPOSAL CONSIDERATIONS:

Characteristic hazardous waste-flammable liquid. Dispose according to local, state and Federal regulations.

14. TRANSPORT INFORMATION:

Hazardous by transport regulations. When transported by Ground and Rail, this product typically is shipped as Consumer Commodity ORM-D. When transported by air, this product is typically shipped as Consumer Commodity or Alcohols N.O.S. depending on package size. When transported by ocean, this product is typically shipped as Limited Quantities. Refer to current regulations for exact requirements.

15. REGULATORY AND OTHER INFORMATION:

TSCA: All ingredients are listed or exempt per reference 15 USC 2602 (2)(B)(iv).
Complies with current FDA regulations for cosmetic and/or over-the-counter drug products.

Notice: The information herein is based on data considered to be accurate as of the date of preparation of this material safety data sheet. However, no warranty or representation, expressed or implied, is made as to the accuracy or completeness of the foregoing data and safety information. The user assumes all liability for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product.

MATERIAL SAFETY DATA SHEET

MSDS Number: 1402E

Section 1 **PRODUCT AND COMPANY IDENTIFICATION**

Trade Name: OATEY PURPLE or CLEAR PRIMER NSF LISTED
Product Nos.: Purple - 30755, 30756, 30757, 30758, 30759, 30927 Clear - 30749, 30750, 30751, 30752, 30753, 30754, 31652, 31653
Product Use: Primer for PVC and CPVC Plastic Pipe
Formula: See section 2
Synonyms: Plastic Pipe Primer
Firm Name & Address: Oatey Company 4700 West 160th Street, Cleveland, Ohio 44135 www.oatey.com
Firm Phone No: (216) 267-7100
Emergency Phone Nos.: For Emergency First Aid call 1-877-740-5015. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1-703-527-3887.
Prepared by: Technical Department
Preparation Date: 11/01/2009

Section 2 **HAZARDS IDENTIFICATION**

Emergency Overview:
Purple or Clear
liquid with an ether-like odor. Extremely flammable liquid and vapor. Vapors may cause flash fire. May cause eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects. Swallowing may cause irritation, nausea, vomiting, diarrhea and kidney or liver disorders. Aspiration hazard. May be fatal if swallowed. Symptoms may be delayed.

Section 3 **COMPOSITION/INFORMATION ON INGREDIENTS**

INGREDIENTS:	%wt/wt :	CAS NUMBER:	ACGIH TLV TWA:	OSHA PEL TWA	OTHER:
Tetrahydrofuran	15 – 30%	109-99-9	50 ppm(skin) 100 ppm STEL	200 ppm	25 ppm (Mfg)
Methyl Ethyl Ketone	25 – 40%	78-93-3	200 ppm 300 ppm	200 ppm	None
Acetone	25 – 40%	67-64-1	500 ppm 750 ppm STEL	1000 ppm	None
Cyclohexanone	15 – 30%	108-94-1	20 ppm(skin) 50 ppm STEL	50 ppm	None

OSHA Hazard Classification: Flammable, irritant, organ effects

Section 4 **FIRST AID MEASURES**

Skin: Remove contaminated clothing immediately. Wash all exposed areas with soap and water. Get medical attention if irritation develops. Remove dried cement with hand cleaner or baby oil.
Eyes: If material gets into eyes or if fumes cause irritation, immediately flush eyes with plenty of water until chemical is removed. If irritation persists, get medical attention immediately.

Inhalation:	If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.
Ingestion:	**DO NOT INDUCE VOMITING.** Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

Section 5 FIRE FIGHTING MEASURES

Flashpoint / Method:	14 - 23 Degrees F. (-10 to -5 Degrees C) / CCCFP
Flammability:	LEL = 1.8 % Volume, UEL = 11.8 % Volume
Extinguishing Media:	Use dry chemical, CO_2, or foam to extinguish fire. Cool fire exposed container with water. Water may be ineffective as an extinguishing agent.
Special Fire Fighting Procedure:	Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored
Unusual Fire And Explosion Hazards:	Extremely flammable liquid. Keep away from heat and all sources of ignition including sparks, flames, lighted cigarettes and pilot lights. Containers may rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.
Hazardous Decomposition Products:	Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

Section 6 ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures:	Remove all sources of ignition and ventilate area. Stop leak if it can be done without risk. Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high. Soak up spill with an inert absorbent such as sand, earth or other non-combusting material. Put absorbent material in covered, labeled metal containers. Prevent liquid from entering watercourses, sewers and natural waterways. Report releases to authorities as required. See Section 13 for disposal information.

Section 7 HANDLING AND STORAGE

Handling:	Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use.
Storage:	Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.
Other:	"Empty" containers retain product residue and can be hazardous. Follow all MSDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

Section 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation:	Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that flammable concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.
Respiratory Protection:	For operations where the exposure limit may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance

	with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.
Skin Protection:	Rubber gloves are suitable for normal use of the product. For long exposures chemical resistant gloves may be required such as 4H(tm) or Silver Shield(tm) to avoid prolonged skin contact.
Eye Protection:	Safety glasses with side shields or safety goggles.

Section 9 PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	151 Degrees F / 66 Degrees C
Melting Point:	Not applicable
Vapor Pressure:	145 mmHg @ 20 Degrees C
Vapor Density:	(Air = 1) 2.5
Volatile Components:	99.96%
Solubility In Water:	Negligible
pH:	Not applicable
Specific Gravity:	0.84 +/- 0.02 @ 20 Degrees C
Evaporation Rate:	(BUAC = 1) = 5.5 - 8.0
Appearance:	Purple or Clear Liquid
Odor:	Ether-Like
Will Dissolve In:	Tetrahydrofuran
Material Is:	Liquid

Section 10 STABILITY AND REACTIVITY

Stability:	Stable.
Conditions To Avoid:	Avoid heat, sparks, flames and other sources of ignition.
Hazardous Decomposition Products:	Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.
Incompatibility/ Materials To Avoid:	Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.
Hazardous Polymerization:	Will not occur.

Section 11 TOXICOLOGICAL INFORMATION

Inhalation:	Vapors or mists may cause mucous membrane and respiratory irritation, coughing, headache, dizziness, dullness, nausea, shortness of breath and vomiting. High concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.	
Skin:	May cause irritation with redness, itching and pain. Methyl ethyl ketone and cyclohexanone may be absorbed through the skin causing effects similar to those listed under inhalation.	
Eye:	Vapors may cause irritation. Direct contact may cause irritation with redness, stinging and tearing of the eyes. May cause eye damage.	
Ingestion:	Swallowing may cause abdominal pain, nausea, vomiting and diarrhea. Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.	
Chronic Toxicity:	Prolonged or repeated overexposure cause dermatitis and damage to the kidney, liver, lungs and central nervous system.	
Toxicity Data:	Acetone:	Oral rat LD50: 5,800 mg/kg Inhalation rat LC50: 50,100 mg/m3/8 hours
	Cyclohexanone:	Oral rat LD50: 1,620 mg/kg Inhalation rat LC50: 8,000 ppm/4 hours Skin rabbit LD50: 1 mL/kg

Tetrahydrofuran:	Oral rat LD50: 1,650 mg/kg Inhalation rat LC50: 21,000 ppm/3 hours
Methyl Ethyl Ketone:	Oral rat LD50: 2,737 mg/kg Inhalation rat LC50: 23,500 mg/m3/8 hours Skin rabbit LD50: 6,480 mg/kg

Sensitization: None of the components are known to cause sensitization.

Carcinogenicity: None of the components are listed as a carcinogen or suspect carcinogen by NTP, IARC or OSHA. The National Toxicology Program has reported that exposure of mice and rats to tetrahydrofuran (THF) vapor levels up to 1800 ppm 6 hr/day, 5 days/week for their lifetime caused an increased incidence of kidney tumors in male rats and liver tumors in female mice. The significance of these findings for human health is unclear at this time, and may be related to "species specific" effects. Elevated incidences of tumors in humans have not been reported for THF. ACGIH has classified cyclohexanone (CYH) and tetrahydrofuran as “A3,” Confirmed Animal Carcinogens with Unknown Relevance to Humans.

Mutagenicity: Cyclohexanone has been positive in bacterial and mammalian assays. Acetone, methyl ethyl ketone and tetrahydrofuran are generally thought not to be mutagenic.

Reproductive Toxicity: Methyl ethyl ketone and cyclohexanone have been shown to cause embryofetal toxicity and birth defects in laboratory animals. Acetone and tetrahydrofuran has been found to cause adverse developmental effects only when exposure levels cause other toxic effects to the mother.

Medical Conditions Aggravated By Exposure: Persons with pre-existing skin, lung, kidney or liver disorders may be at increased risk from exposure to this product.

Section 12 ECOLOGICAL INFORMATION

This product is not expected to be toxic to aquatic organisms.
Cyclohexanone: 96 hour LC50 values for fish is over 100 mg/l.
Tetrahydrofuran: 96 hour LC50 fathead minnow: 2160 mg/L.
Acetone: 96 hour LC50 for fish is greater than 100 mg/L.
Methyl Ethyl Ketone: 96 hour LC50 for fish is greater than 100 mg/L.

VOC Information: This product emits VOC’s (volatile organic compounds) in its use. Make sure that use of this product complies with local VOC emission regulations, where they exist.

VOC Level: Maximum 550 g/L per SCAQMD Test Method 316A.

Section 13 DISPOSAL CONSIDERATIONS

Waste Disposal:	Dispose in accordance with current local, state and federal regulations.
RCRA Hazardous Waste Number:	U002, U057, U159, U213
EPA Hazardous Waste ID Number:	D001, D035, F003, F0005
EPA Hazard Waste Number:	Ignitable Waste. Toxic Waste (Methyl Ethyl Ketone content)

Section 14 TRANSPORT INFORMATION

DOT	Less than 1 Liter (0.3 gal)	Greater than 1 Liter (0.3 gal)
UN/NA Number:	None	UN1993
Proper Shipping Name:	Consumer Commodity	Flammable Liquid, NOS (Methyl Ethyl Ketone, Acetone)
Hazard Class:	ORM-D	3

Packing Group:	None	PGII
Hazard Labels:	None	Flammable Liquid
IMDG		
UN Number:	UN1993	UN1993
Proper Shipping Name:	Flammable Liquid, NOS (Limited Quantity)	Flammable Liquid, NOS (Methyl Ethyl Ketone, Acetone)
Hazard Class:	3	3
Packing Group:	II	II
Label:	None (Limited Quantities are expected from labeling)	Class 3 (Flammable Liquid)
Flashpoint (deg C)	-10 to -5 Degrees C	-10 to -5 Degrees C

2008 North American Emercency Response Guidebook Number: 127

Section 15 REGULATORY INFORMATION

Hazard Category for Section 311/312:	Acute Health, Chronic Health, Flammable
Section 302 Extremely Hazardous Substances (TPQ):	This product does not contain chemicals regulated under SARA Section 302.
Section 313 Toxic Chemicals:	This product does not contain chemicals subject to SARA Title III Section 313 Reporting requirements.
CERCLA 103 Reportable Quantity:	Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for the product, based on the RQ for Tetrahydrofuran (30% maximum) of 1,000 lbs, is 3,333 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.
California Proposition 65:	This product does not contain any chemicals subject to California Proposition 65 regulations.
TSCA Inventory	All of the components of this product are listed on the TSCA inventory.
Canadian WHIMS Classification:	Class B, Division 2; Class D, Division 2, Subdivision B; Class D, Division 2, Subdivision A. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Section 16 OTHER INFORMATION

NFPA and HMIS:	
NFPA Hazard Signal:	Health: 2 Flammability: 3 Reactivity: 1 Special: None
HMIS Hazard Signal:	Health: 2* Flammability: 3 Reactivity: 1 PPE: G

Disclaimer:
The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, we cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use.

Template: tmpl-us-e1

MATERIAL SAFETY DATA SHEET

MSDS Number: 1402E

Section 1 **PRODUCT AND COMPANY IDENTIFICATION**

Trade Name: OATEY PURPLE or CLEAR PRIMER NSF LISTED
Product Nos.: Purple - 30755, 30756, 30757, 30758, 30759, 30927 Clear - 30749, 30750, 30751, 30752, 30753, 30754, 31652, 31653
Product Use: Primer for PVC and CPVC Plastic Pipe
Formula: See section 2
Synonyms: Plastic Pipe Primer
Firm Name & Address: Oatey Company 4700 West 160th Street, Cleveland, Ohio 44135 www.oatey.com
Firm Phone No: (216) 267-7100
Emergency Phone Nos.: For Emergency First Aid call 1-877-740-5015. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1-703-527-3887.
Prepared by: Technical Department
Preparation Date: 11/01/2009

Section 2 **HAZARDS IDENTIFICATION**

Emergency Overview:
Purple or Clear
liquid with an ether-like odor. Extremely flammable liquid and vapor. Vapors may cause flash fire. May cause eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects. Swallowing may cause irritation, nausea, vomiting, diarrhea and kidney or liver disorders. Aspiration hazard. May be fatal if swallowed. Symptoms may be delayed.

Section 3 **COMPOSITION/INFORMATION ON INGREDIENTS**

INGREDIENTS:	%wt/wt :	CAS NUMBER:	ACGIH TLV TWA:	OSHA PEL TWA	OTHER:
Tetrahydrofuran	15 – 30%	109-99-9	50 ppm(skin) 100 ppm STEL	200 ppm	25 ppm (Mfg)
Methyl Ethyl Ketone	25 – 40%	78-93-3	200 ppm 300 ppm	200 ppm	None
Acetone	25 – 40%	67-64-1	500 ppm 750 ppm STEL	1000 ppm	None
Cyclohexanone	15 – 30%	108-94-1	20 ppm(skin) 50 ppm STEL	50 ppm	None

OSHA Hazard Classification: Flammable, irritant, organ effects

Section 4 **FIRST AID MEASURES**

Skin: Remove contaminated clothing immediately. Wash all exposed areas with soap and water. Get medical attention if irritation develops. Remove dried cement with hand cleaner or baby oil.
Eyes: If material gets into eyes or if fumes cause irritation, immediately flush eyes with plenty of water until chemical is removed. If irritation persists, get medical attention immediately.

Inhalation:	If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.
Ingestion:	**DO NOT INDUCE VOMITING.** Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

Section 5 FIRE FIGHTING MEASURES

Flashpoint / Method:	14 - 23 Degrees F. (-10 to -5 Degrees C) / CCCFP
Flammability:	LEL = 1.8 % Volume, UEL = 11.8 % Volume
Extinguishing Media:	Use dry chemical, CO_2, or foam to extinguish fire. Cool fire exposed container with water. Water may be ineffective as an extinguishing agent.
Special Fire Fighting Procedure:	Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored
Unusual Fire And Explosion Hazards:	Extremely flammable liquid. Keep away from heat and all sources of ignition including sparks, flames, lighted cigarettes and pilot lights. Containers may rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.
Hazardous Decomposition Products:	Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

Section 6 ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures:	Remove all sources of ignition and ventilate area. Stop leak if it can be done without risk. Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high. Soak up spill with an inert absorbent such as sand, earth or other non-combusting material. Put absorbent material in covered, labeled metal containers. Prevent liquid from entering watercourses, sewers and natural waterways. Report releases to authorities as required. See Section 13 for disposal information.

Section 7 HANDLING AND STORAGE

Handling:	Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use.
Storage:	Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.
Other:	"Empty" containers retain product residue and can be hazardous. Follow all MSDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

Section 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation:	Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that flammable concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.
Respiratory Protection:	For operations where the exposure limit may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance

	with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.
Skin Protection:	Rubber gloves are suitable for normal use of the product. For long exposures chemical resistant gloves may be required such as 4H(tm) or Silver Shield(tm) to avoid prolonged skin contact.
Eye Protection:	Safety glasses with side shields or safety goggles.

Section 9 PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	151 Degrees F / 66 Degrees C
Melting Point:	Not applicable
Vapor Pressure:	145 mmHg @ 20 Degrees C
Vapor Density:	(Air = 1) 2.5
Volatile Components:	99.96%
Solubility In Water:	Negligible
pH:	Not applicable
Specific Gravity:	0.84 +/- 0.02 @ 20 Degrees C
Evaporation Rate:	(BUAC = 1) = 5.5 - 8.0
Appearance:	Purple or Clear Liquid
Odor:	Ether-Like
Will Dissolve In:	Tetrahydrofuran
Material Is:	Liquid

Section 10 STABILITY AND REACTIVITY

Stability:	Stable.
Conditions To Avoid:	Avoid heat, sparks, flames and other sources of ignition.
Hazardous Decomposition Products:	Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.
Incompatibility/ Materials To Avoid:	Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.
Hazardous Polymerization:	Will not occur.

Section 11 TOXICOLOGICAL INFORMATION

Inhalation:	Vapors or mists may cause mucous membrane and respiratory irritation, coughing, headache, dizziness, dullness, nausea, shortness of breath and vomiting. High concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.	
Skin:	May cause irritation with redness, itching and pain. Methyl ethyl ketone and cyclohexanone may be absorbed through the skin causing effects similar to those listed under inhalation.	
Eye:	Vapors may cause irritation. Direct contact may cause irritation with redness, stinging and tearing of the eyes. May cause eye damage.	
Ingestion:	Swallowing may cause abdominal pain, nausea, vomiting and diarrhea. Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.	
Chronic Toxicity:	Prolonged or repeated overexposure cause dermatitis and damage to the kidney, liver, lungs and central nervous system.	
Toxicity Data:	Acetone:	Oral rat LD50: 5,800 mg/kg Inhalation rat LC50: 50,100 mg/m3/8 hours
	Cyclohexanone:	Oral rat LD50: 1,620 mg/kg Inhalation rat LC50: 8,000 ppm/4 hours Skin rabbit LD50: 1 mL/kg

Tetrahydrofuran:	Oral rat LD50: 1,650 mg/kg Inhalation rat LC50: 21,000 ppm/3 hours
Methyl Ethyl Ketone:	Oral rat LD50: 2,737 mg/kg Inhalation rat LC50: 23,500 mg/m3/8 hours Skin rabbit LD50: 6,480 mg/kg

Sensitization: None of the components are known to cause sensitization.

Carcinogenicity: None of the components are listed as a carcinogen or suspect carcinogen by NTP, IARC or OSHA. The National Toxicology Program has reported that exposure of mice and rats to tetrahydrofuran (THF) vapor levels up to 1800 ppm 6 hr/day, 5 days/week for their lifetime caused an increased incidence of kidney tumors in male rats and liver tumors in female mice. The significance of these findings for human health is unclear at this time, and may be related to "species specific" effects. Elevated incidences of tumors in humans have not been reported for THF. ACGIH has classified cyclohexanone (CYH) and tetrahydrofuran as “A3,” Confirmed Animal Carcinogens with Unknown Relevance to Humans.

Mutagenicity: Cyclohexanone has been positive in bacterial and mammalian assays. Acetone, methyl ethyl ketone and tetrahydrofuran are generally thought not to be mutagenic.

Reproductive Toxicity: Methyl ethyl ketone and cyclohexanone have been shown to cause embryofetal toxicity and birth defects in laboratory animals. Acetone and tetrahydrofuran has been found to cause adverse developmental effects only when exposure levels cause other toxic effects to the mother.

Medical Conditions Aggravated By Exposure: Persons with pre-existing skin, lung, kidney or liver disorders may be at increased risk from exposure to this product.

Section 12 ECOLOGICAL INFORMATION

This product is not expected to be toxic to aquatic organisms.
Cyclohexanone: 96 hour LC50 values for fish is over 100 mg/l.
Tetrahydrofuran: 96 hour LC50 fathead minnow: 2160 mg/L.
Acetone: 96 hour LC50 for fish is greater than 100 mg/L.
Methyl Ethyl Ketone: 96 hour LC50 for fish is greater than 100 mg/L.

VOC Information: This product emits VOC’s (volatile organic compounds) in its use. Make sure that use of this product complies with local VOC emission regulations, where they exist.

VOC Level: Maximum 550 g/L per SCAQMD Test Method 316A.

Section 13 DISPOSAL CONSIDERATIONS

Waste Disposal:	Dispose in accordance with current local, state and federal regulations.
RCRA Hazardous Waste Number:	U002, U057, U159, U213
EPA Hazardous Waste ID Number:	D001, D035, F003, F0005
EPA Hazard Waste Number:	Ignitable Waste. Toxic Waste (Methyl Ethyl Ketone content)

Section 14 TRANSPORT INFORMATION

DOT	Less than 1 Liter (0.3 gal)	Greater than 1 Liter (0.3 gal)
UN/NA Number:	None	UN1993
Proper Shipping Name:	Consumer Commodity	Flammable Liquid, NOS (Methyl Ethyl Ketone, Acetone)
Hazard Class:	ORM-D	3

Packing Group:	None	PGII
Hazard Labels:	None	Flammable Liquid
IMDG		
UN Number:	UN1993	UN1993
Proper Shipping Name:	Flammable Liquid, NOS (Limited Quantity)	Flammable Liquid, NOS (Methyl Ethyl Ketone, Acetone)
Hazard Class:	3	3
Packing Group:	II	II
Label:	None (Limited Quantities are expected from labeling)	Class 3 (Flammable Liquid)
Flashpoint (deg C)	-10 to -5 Degrees C	-10 to -5 Degrees C

2008 North American Emercency Response Guidebook Number: 127

Section 15 REGULATORY INFORMATION

Hazard Category for Section 311/312:	Acute Health, Chronic Health, Flammable
Section 302 Extremely Hazardous Substances (TPQ):	This product does not contain chemicals regulated under SARA Section 302.
Section 313 Toxic Chemicals:	This product does not contain chemicals subject to SARA Title III Section 313 Reporting requirements.
CERCLA 103 Reportable Quantity:	Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for the product, based on the RQ for Tetrahydrofuran (30% maximum) of 1,000 lbs, is 3,333 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.
California Proposition 65:	This product does not contain any chemicals subject to California Proposition 65 regulations.
TSCA Inventory	All of the components of this product are listed on the TSCA inventory.
Canadian WHIMS Classification:	Class B, Division 2; Class D, Division 2, Subdivision B; Class D, Division 2, Subdivision A. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Section 16 OTHER INFORMATION

NFPA and HMIS:	
NFPA Hazard Signal:	Health: 2 Flammability: 3 Reactivity: 1 Special: None
HMIS Hazard Signal:	Health: 2* Flammability: 3 Reactivity: 1 PPE: G

Disclaimer:
The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, we cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use.

Template: tmpl-us-e1

MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Trade Name: OATEY PVC REGULAR CLEAR CEMENT
Product No: 31012, 31013, 31014, 31015, 31016, 31958, 31959, 31960, 31961
Product Use: Cement for PVC Plastic Pipe
Formula: PVC Resin in Solvent Solution
Synonyms: PVC Plastic Pipe Cement
Firm Name & Mailing Address: OATEY CO. 4700 West 160th Street P.O. Box 35906 Cleveland, Ohio 44135, U.S.A. http://www.oatey.com
Oatey Phone Number: (216) 267-7100 or (800) 321-9532
Emergency Phone Numbers: For Emergency First Aid call 1-877-740-5015. For chemical transportation emergencies ONLY, call Chemtrec at 1-800-424-9300. Outside the U.S. 1-703-527-3887.
Prepared By: Technical Director
Preparation Date: November 11, 2008

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS:	% wt:	CAS NUMBER:	ACGIH TLV TWA:	OSHA PEL TWA:	OTHER:
Methyl Ethyl Ketone	10 - 60%	78-93-3	200 ppm 300 ppm STEL	200 ppm	None
Tetrahydrofuran	20 - 50%	109-99-9	50 ppm(skin) 100 ppm STEL	200 ppm	25 ppm (Mfg)
PVC Resin (Non-hazardous)	10 - 18%	9002-86-2	10 mg/m3	15 mg/m3	None
Acetone	0 - 20%	67-64-1	500 ppm 750 ppm STEL	1000 ppm	None
Cyclohexanone	2 - 15%	108-94-1	20 ppm(skin)	25 ppm	None

OSHA Hazard Classification: Flammable, irritant, organ effects

SECTION 3 HAZARDS IDENTIFICATION

Emergency Overview:
Clear liquid with an ether-like odor. Extremely flammable liquid and vapor. Vapors may cause flash fire. May cause eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects. Swallowing may cause irritation, nausea, vomiting, diarrhea and kidney or liver disorders. Aspiration hazard. May be fatal if swallowed. Symptoms may be delayed.

SECTION 4 FIRST AID PROCEDURES

CALL 1-877-740-5015 or 1-303-623-5716 COLLECT

Skin: Remove contaminated clothing immediately. Wash all exposed areas with soap and water. Get medical attention if irritation develops. Remove dried cement with Oatey Plumber's Hand Cleaner or baby oil.

Eyes: If material gets into eyes or if fumes cause irritation, immediately flush eyes with plenty of water until chemical is removed. If irritation persists, get medical attention immediately.

Inhalation: If symptoms of exposure develop, remove to fresh air. If breathing becomes difficult, administer oxygen. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.

Ingestion: **DO NOT INDUCE VOMITING.** Rinse mouth with water. Never give anything by mouth to a person who is unconscious or drowsy. Get immediate medical attention by calling a Poison Control Center, or hospital emergency room. If medical advice cannot be obtained, then take the person and product to the nearest medical emergency treatment center or hospital.

SECTION 5 FIRE FIGHTING MEASURES

Flashpoint / Method:	14 - 23 Degrees F. (-10 to -5 Degrees C) / CCCFP
Flammability:	LEL = 1.8 % Volume, UEL = 11.8 % Volume
Extinguishing Media:	Use dry chemical, CO2, or foam to extinguish fire. Cool fire exposed container with water. Water may be ineffective as an extinguishing agent.
Special Fire Fighting Procedure:	Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored
Unusual Fire and Explosion Hazards:	Extremely flammable liquid. Keep away from heat and all sources of ignition including sparks, flames, lighted cigarettes and pilot lights. Containers may rupture or explode in the heat of a fire. Vapors are heavier than air and may travel to a remote ignition source and flash back. This product contains tetrahydrofuran that may form explosive organic peroxide when exposed to air or light or with age.
Hazardous Decomposition Products:	Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures:	Remove all sources of ignition and ventilate area. Stop leak if it can be done without risk. Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high. Soak up spill with an inert absorbent such as sand, earth or other non-combusting material. Put absorbent material in covered, labeled metal containers. Prevent liquid from entering watercourses, sewers and natural waterways. Report releases to authorities as required. See Section 12 for disposal information.

SECTION 7 HANDLING AND STORAGE

Handling:	Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists. Use with adequate ventilation (equivalent to outdoors). Wash thoroughly after handling. Do not eat, drink or smoke in the work area. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Keep containers closed when not in use.
Storage:	Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.
Other:	"Empty" containers retain product residue and can be hazardous. Follow all MSDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation:	Open doors & windows. Provide ventilation capable of maintaining emissions at the point of use below recommended exposure limits. If used in enclosed area, use exhaust fans. Exhaust fans should be explosion-proof or set up in a way that flammable concentrations of solvent vapors are not exposed to electrical fixtures or hot surfaces.
Respiratory Protection:	For operations where the exposure limit may be exceeded, a NIOSH approved organic vapor respirator or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration, select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.
Skin Protection:	Rubber gloves are suitable for normal use of the product. For long exposures chemical resistant gloves may be required such as 4H(tm) or Silver Shield(tm) to avoid prolonged skin contact.
Eye Protection:	Safety glasses with side shields or safety goggles.
Other:	Eye wash and safety shower should be available.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	151 Degrees F / 66 Degrees C
Melting Point:	N/A
Vapor Pressure:	145 mmHg @ 20 Degrees C
Vapor Density:	(Air = 1) 2.5
Volatile Components:	84-88%
Solubility In Water:	Negligible
pH:	N/A
Specific Gravity:	0.90 +/- 0.015
Evaporation Rate:	(BUAC = 1) = 5.5 - 8.0
Appearance:	Clear Liquid
Odor:	Ether-like odor
Will Dissolve In:	Tetrahydrofuran
Material Is:	Liquid

SECTION 10 STABILITY AND REACTIVITY

Stability:	Stable.
Conditions To Avoid:	Avoid heat, sparks, flames and other sources of ignition.
Hazardous Decomposition Products:	Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.
Incompatibility/ Materials To Avoid:	Oxidizing agents, alkalies, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.
Hazardous Polymerization:	Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Inhalation:	Vapors or mists may cause mucous membrane and respiratory irritation, coughing, headache, dizziness, dullness, nausea, shortness of breath and vomiting. High concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.	
Skin:	May cause irritation with redness, itching and pain. Methyl ethyl ketone and cyclohexanone may be absorbed through the skin causing effects similar to those listed under inhalation.	
Eye:	Vapors may cause irritation. Direct contact may cause irritation with redness, stinging and tearing of the eyes. May cause eye damage.	
Ingestion:	Swallowing may cause abdominal pain, nausea, vomiting and diarrhea. Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.	
Chronic Toxicity:	Prolonged or repeated overexposure cause dermatitis and damage to the kidney, liver, lungs and central nervous system.	
Toxicity Data:	Acetone:	Oral rat LD50: 5,800 mg/kg Inhalation rat LC50: 50,100 mg/m3/8 hours
	Cyclohexanone:	Oral rat LD50: 1,620 mg/kg Inhalation rat LC50: 8,000 ppm/4 hours Skin rabbit LD50: 1 mL/kg
	Tetrahydrofuran:	Oral rat LD50: 1,650 mg/kg Inhalation rat LC50: 21,000 ppm/3 hours
	Methyl Ethyl Ketone:	Oral rat LD50: 2,737 mg/kg Inhalation rat LC50: 23,500 mg/m3/8 hours Skin rabbit LD50: 6,480 mg/kg
Sensitization:	None of the components are known to cause sensitization.	
Carcinogenicity:	None of the components are listed as a carcinogen or suspect carcinogen by NTP, IARC or OSHA. The National Toxicology Program has reported that exposure of mice and rats to Tetrahydrofuran (THF) vapor levels up to 1800 ppm 6 hr/day, 5 days/week for their lifetime caused an increased incidence of kidney tumors in male rats and liver tumors in female mice. The significance of these	

	findings for human health are unclear at this time, and may be related to "species specific" effects. Elevated incidences of tumors in humans have not been reported for THF. ACGIH has classified cyclohexanone (CYH) and tetrahydrofuran as “A3,” Confirmed Animal Carcinogens with Unknown Relevance to Humans.
Mutagenicity:	Cyclohexanone has been positive in bacterial and mammalian assays. Acetone, methyl ethyl ketone and tetrahydrofuran are generally thought not to be mutagenic.
Reproductive Toxicity:	Methyl ethyl ketone and cyclohexanone have been shown to cause embryofetal toxicity and birth defects in laboratory animals. Acetone and tetrahydrofuran have been found to cause adverse developmental effects only when exposure levels cause other toxic effects to the mother.
Medical Conditions Aggravated By Exposure:	Persons with pre-existing skin, lung, kidney or liver disorders may be at increased risk from exposure to this product.

SECTION 12 ECOLOGICAL INFORMATION

This product is not expected to be toxic to aquatic organisms.
Cyclohexanone: 96 hour LC50 values for fish is over 100 mg/l.
Tetrahydrofuran: 96 hour LC50 fathead minnow: 2160 mg/L.
Methyl Ethyl Ketone: 96 hour LC50 for fish is greater than 100 mg/L.
Acetone: 96 hour LC50 for fish is greater than 100 mg/L.

VOC Information:	This product emits VOC's (volatile organic compounds) in its use. Make sure that use of this product complies with local VOC emission regulations, where they exist.
VOC Level:	Maximum 600 g/L per SCAQMD Test Method 316A.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose in accordance with current local, state and federal regulations.
RCRA Hazardous Waste Number: U002, U057, U159, U213
EPA Hazardous Waste ID Number: D001, D035, F003, F005
EPA Hazard Waste Class: Ignitable Waste. Toxic Waste (Methyl Ethyl Ketone content)

SECTION 14 TRANSPORT INFORMATION

DOT	Less than 1 Liter (0.3 gal)	Greater than 1 Liter (0.3 gal)
UN/NA Number:	None	UN1133
Proper Shipping Name:	Consumer Commodity	Adhesives
Hazard Class:	ORM-D	3
Packing Group:	None	PGII
Hazard Labels:	None	Flammable Liquid
IMDG		
UN Number:	UN1133	UN1133
Proper Shipping Name:	Adhesives	Adhesives
Hazard Class:	3	3
Packing Group:	II	II
Label:	None (Limited Quantities are excepted from labeling)	Class 3 (Flammable Liquid)
Flashpoint (deg C)	-10 to -5 Degrees C	-10 to -5 Degrees C

2008 North American Emergency Response Guidebook Number: 127

SECTION 15 REGULATORY INFORMATION

Hazard Category for Section 311/312:	Acute Health, Chronic Health, Flammable
Section 302 Extremely Hazardous Substances (TPQ):	This product does not contain chemicals regulated under SARA Section 302.
Section 313 Toxic Chemicals:	This product does not contain chemicals subject to SARA Title III Section 313 Reporting requirements.

CERCLA 103 Reportable Quantity:	Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for the product, based on the RQ for Tetrahydrofuran (50% maximum) of 1,000 lbs, is 2,000 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.
California Proposition 65:	This product contains trace amounts of chemicals known to the State of California to cause cancer. Under normal use conditions, exposure to these chemicals at levels above the State of California "No Significant Risk Level" (NSRL) are unlikely. Oatey Strongly encourages the use of proper personal protective equipment (PPE) and ventilation guidelines noted in Section 8 to minimize exposure to these chemicals.
TSCA Inventory:	All of the components of this product are listed on the TSCA inventory.
Canadian WHIMS Classification:	Class B, Division 2; Class D, Division 2, Subdivision B. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDs contains all the information required by the CPR.

SECTION 16 OTHER INFORMATION

NFPA and HMIS

NFPA Hazard Signal:	Health: 2	Flammability: 3	Reactivity: 1	Special: None
HMIS Hazard Signal:	Health: 2*	Flammability: 3	Reactivity: 1	PPE: G

Disclaimer:

The information herein has been compiled from sources believed to be reliable, up-to-date, and is accurate to the best of our knowledge. However, Oatey cannot give any guarantees regarding information from other sources, and expressly does not make warranties, nor assumes any liability for its use.

Date Revised: FEB 2005 CANTEX MATERIAL SAFETY DATA SHEET Supersedes: MAY 2004

Information on this form is furnished solely for the purpose of compliance with the Occupational Safety and Health Act and shall not be used for any other purpose. CANTEX urges the customers receiving this Material Safety Data Sheet to study it carefully to become aware of the hazards, if any, of the product involved. In the interest of safety, you should notify your employees, agents and contractors of the information on this sheet.

SECTION I

MANUFACTURER'S NAMEINSTANT PLASTICS SYSTEMS**ADDRESS**P. O. BOX 70013, SANTA ANA, CA, 92725-0013

Transportation Emergencies: CHEMTREC: (800) 424-9300 **Medical Emergencies:** 3 E COMPANY (24 Hour No.) (800) 451-8346 **Business: (800) 433-5623**

CHEMICAL NAME and FAMILY Solvent Cement for PVC Plastic Pipe Mixture of PVC Resin and Organic Solvents

TRADE NAME: CANTEX #99 CLEAR PVC SOLVENT CEMENT

FORMULA: Proprietary

SECTION II - HAZARDOUS INGREDIENTS

None of the ingredients below are listed as **DUPONT** carcinogens by IARC, NTP or OSHA **CAS# APPROX % ACGIH-TLV ACGIH-STEL OSHA-PEL OSHA-STEL (A) AEL (B) STEL**

Polyvinyl Chloride Resin (PVC) NON/HAZ 10 - 20 N/A N/A Tetrahydrofuran (THF)** 109-99-9 20 - 30 200 PPM 250 PPM 200 PPM 250 PPM 50 PPM 75 PPM Methyl Ethyl Ketone (MEK) 78-93-3 25 - 40* 200 PPM 300 PPM 200 PPM 300 PPM Cyclohexanone 108-94-1 15 - 25 20 PPM Skin 50 PPM 50 PPM Skin All of the constituents of CANTEX adhesive products are listed on the TSCA inventory of chemical substances maintained by the US EPA, or are exempt from that listing.

* Title III Section 313 Supplier Notification: This product contains toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40CFR372. This information must be included in all MSDS's that are copied and distributed for this material.

(A) DuPont and BASF mfg's Acceptable Exposure Limit (AEL) guidelines for 8 hour and 12 hour TWA, (B) DuPont/BASF recommended STEL for 15 minute TWA.

**Information found in a report from the National Toxicology Program (NTP) on an inhalation study in rats and mice suggests that Tetrahydrofuran (THF) can cause tumors in animals. In the study the rats and mice were exposed to THF vapor levels up to 1800 PPM for two years (their lifetime), 6 hours/day, 5 days/week. Test results showed evidence of liver tumors in female mice and kidney tumors in male rats. No evidence of tumors was seen in female rats and male mice. There is no data linking Tetrahydrofuran exposure with cancer in humans.

BULK SHIPPING INFORMATION / CONTAINERS LARGER THAN ONE LITERDOT Shipping Name: Adhesive DOT Hazard Class: 3Identification Number: UN 1133Packaging Group: II Label Required: Flammable Liquid **SHIPPING INFORMATION FOR CONTAINERS LESS THAN ONE LITER**DOT Shipping Name: Consumer Commodity DOT Hazard Class: ORM-D

SPECIAL HAZARD DESIGNATIONS HMIS NFPA HAZARD RATING HEALTH: 2 2 0 - MINIMAL FLAMMABILITY: 3 3 1 - SLIGHT REACTIVITY: 0 1 2 - MODERATE PROTECTIVE 3 - SERIOUS EQUIPMENT: B - H 4 - SEVERE B = Eye, Hand/Skin (for normal solvent-welding activities) H = Eye, Hand/Skin, Respiratory Protection and Impermeable Apron (splash/ immersion risks)

SECTION III - PHYSICAL DATA

APPEARANCE Clear, regular syrupy liquid	**ODOR** Ethereal	**BOILING POINT (°F/°C)** 151°F (67°C) Based on first boiling component: THF
SPECIFIC GRAVITY @ 73°F ± 3.6° (23°C ± 2°) Typical 0.900 ± 0.040	**VAPOR PRESSURE (mm Hg.)** 143 mm Hg. based on first boiling component, THF @ 68°F (20°C)	**PERCENT VOLATILE BY VOLUME (%)** Approx: 80 - 90 %
VAPOR DENSITY (Air = 1) 2.49	**EVAPORATION RATE (BUAC = 1)** > 1.0	**SOLUBILITY IN WATER** Solvent portion completely soluble in water. Resin portion separates out.

VOC STATEMENT: VOC as manufactured: 795 Grams/Liter (g/l). Maximum VOC emission as applied and tested per SCAQMD Rule 1168, Test Method 316A: 580 g/l.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

	LEL	UEL
FLASH POINT FLAMMABLE LIMITS -4°F (-20°C) T.C.C. Based on THF (PERCENT BY VOLUME)	2.0	11.8

FIRE EXTINGUISHING MEDIA Ansul "Purple K" potassium bicarbonate dry chemical, any appropriately sized ABC dry chemical, carbon dioxide or foam extinguisher can be used for small fires. Use of a water fog by trained personnel can extinguish small/large fires.

SPECIAL FIRE FIGHTING PROCEDURES Evacuate enclosed areas. Stay upwind. Close quarters or confined spaces require self-contained breathing apparatus, positive pressure hose masks or airline masks. Use of a water fog by trained personnel can extinguish small/large fires and avoid water flow or water streams/spray distributing burning material or contaminated water over a large area or into sewers or storm drains. Use water spray to cool containers, to flush spills from source of ignition and to disperse vapors.

UNUSUAL FIRE AND EXPLOSION HAZARDS Fire hazard because of low flash point and high volatility. Vapors are heavier than air and may travel to source(s) of ignition at or near floor or lower levels and may flash back.

SECTION V - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: X Inhalation X Skin Contact Eye Contact Ingestion

EFFECT OF OVEREXPOSURE **ACUTE:** Inhalation: Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of eyes and nasal passages. Skin Contact: Skin irritant. Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact. Skin Absorption: Prolonged or widespread exposure may result in the absorption of harmful amounts of material. Eye Contact: Overexposure may result in severe eye injury with corneal or conjuctival inflammation on contact with the liquid. Vapors slightly uncomfortable. Ingestion: Moderately toxic. May cause nausea, vomiting, diarrhea. May cause mental sluggishness. **CHRONIC:** Symptoms of respiratory tract irritation and damage to respiratory epithelium were reported in rats exposed to 5000 ppm THF for 90 days. Elevation of SGPT suggests a disturbance in liver function. The NOEL was reported to be 200 ppm.

REPRODUCTIVE EFFECTS TERATOGENICITY MUTAGENICITY EMBRYOTOXICITY SENSITIZATION TO PRODUCT SYNERGISTIC PRODUCTS N. AP. N. AP. N. AP. N. AP. N. AP. N. AV.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Individuals with pre-existing diseases of the eyes, skin or respiratory system may have increased susceptibility to the toxicity of excessive exposures.

EMERGENCY AND FIRST AID PROCEDURES Inhalation: If overcome by vapors, remove to fresh air and if breathing stopped, give artificial respiration. If breathing is difficult, give oxygen. Call physician. Eye Contact: Flush eyes with plenty of water for 15 minutes and call a physician. Skin Contact: Remove contaminated clothing and shoes. Wash skin with plenty of soap and water for at least 15 minutes. If irritation develops, get medical attention. Ingestion: Give 1 or 2 glasses of water or milk. Do not induce vomiting. Call physician or poison control center immediately.

SECTION VI - REACTIVITY

STABILITY	UNSTABLE		CONDITIONS TO AVOID Keep away from heat, sparks, open flame and other sources of ignition.
	STABLE	X	

INCOMPATIBILITY (MATERIALS TO AVOID) Caustics, ammonia, inorganic acids, chlorinated compounds, strong oxidizers and isocyanates.

HAZARDOUS DECOMPOSITION PRODUCTS When forced to burn, this product gives out carbon monoxide, carbon dioxide, hydrogen chloride and smoke.

HAZARDOUSPOLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID Keep away from heat, sparks, open flame and other sources of ignition.
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Eliminate all ignition sources. Avoid breathing of vapors. Keep liquid out of eyes. Flush with large amount of water. Contain liquid with sand or earth. Absorb with sand or nonflammable absorbent material and transfer into steel drums for recovery or disposal. Prevent liquid from entering drains.

WASTE DISPOSAL METHOD Follow local, State and Federal regulations. Consult disposal expert. Can be disposed of by incineration. Excessive quantities should not be permitted to enter drains. Empty containers should be air dried before disposing. Hazardous Waste Code (CA): 214.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type) Atmospheric levels should be maintained below established exposure limits contained in Section II. If airborne concentrations exceed those limits, use of a NIOSH approved organic vapor cartridge respirator with full face-piece is recommended. The effectiveness of an air purifying respirator is limited. Use it only for a single short-term exposure. For emergency and other conditions where short-term exposure guidelines may be exceeded, use an approved positive pressure self-contained breathing apparatus.

VENTILATION Use only with adequate ventilation. Do not use in close quarters or confined spaces. Open doors and/or windows to ensure airflow and air changes. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone and to keep contaminants below levels listed in Section II. Use only explosion-proof ventilation equipment.

PROTECTIVE GLOVES PVA coated rubber gloves for frequent dipping/immersion. Use of latex/nit rile surgical gloves or solvent resistant barrier crème should provide adequate protection when normal solvent-cement welding practices and procedures are used for solvent welding of plastic sheet/pipe joints.

EYE PROTECTION Splash proof chemical goggles, face shield, safety glasses (spectacles) with brow guards & side shields, etc. as appropriate for exposure.

OTHER PROTECTIVE EQUIPMENT AND HYGIENIC PRACTICES Impervious apron and a source of running water to flush or wash the eyes and skin in case of contact.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Store in the shade between 40°F - 110°F (5°C - 43.7°C). Keep away from heat, sparks, open flame and other sources of ignition. Avoid prolonged breathing of vapor. Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Train employees on all special handling procedures before they work with this product.

OTHER PRECAUTIONS Follow all precautionary information given on container label, product bulletins and our solvent cementing literature. All material handling equipment should be electrically grounded.

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.

Material Safety Data Sheet

Section 1: Product & Company Identification

Product Name: **QD® Electronic Cleaner** (Aerosol)

Product Number (s): **05101, 05102**

Manufactured By:

CRC Industries, Inc.
885 Louis Drive
Warminster, PA 18974
www.crcindustries.com

General Information	(215) 674-4300
Technical Assistance	(800) 521-3168
Customer Service	(800) 272-8963
24-Hr Emergency (CHEMTREC)	(800) 424-9300

Section 2: Hazards Identification

Emergency Overview

Appearance & Odor: Clear, colorless liquid with alcohol odor

DANGER

Extremely flammable. Harmful or fatal if swallowed. Contents under pressure.

As defined by OSHA's Hazard Communication Standard, this product is hazardous.

Potential Health Effects:

EYE:	May cause mild irritation including stinging and redness, but does not injure eye.
SKIN:	Single, brief exposures may cause mild irritation. Frequent or prolonged contact may cause more severe irritation, defatting of the skin, and dermatitis.
INHALATION:	High vapor concentrations are irritating to the respiratory tract and may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness and other central nervous system effects, including death. May cause peripheral nervous system disorder and/or damage.
INGESTION:	Low order of toxicity by ingestion. Main hazard is aspiration into the lungs during swallowing or vomiting. Small amounts aspirated into the respiratory system may cause bronchopneumonia or pulmonary adema, possible progressing to death.
CHRONIC EFFECTS:	Overexposure to n-hexane may cause progressive and potentially irreversible damage to the peripheral nervous system, particularly in the arms and legs.
TARGET ORGANS:	central nervous system, peripheral nervous system, respiratory system

Medical Conditions Aggravated by Exposure: skin and respiratory conditions

See Section 11 for toxicology and carcinogenicity information on product ingredients.

Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
Hexane isomers	various	75 - 85
n-Hexane	110-54-3	6.1
Synthetic isoparaffinic hydrocarbon	64741-66-8	5 - 10
Methanol	67-56-1	< 1
Carbon dioxide	124-38-9	3 - 8

Section 4: First Aid Measures

Eye Contact: Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.

Skin Contact: Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.

Inhalation: Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Call a physician.

Ingestion: DO NOT induce vomiting. Contact a physician immediately.

Note to Physicians: Treat symptomatically. Gastric lavage using a cuffed endotracheal tube may be performed at your discretion.

Section 5: Fire-Fighting Measures

Flammable Properties: This product is extremely flammable in accordance with aerosol flammability definitions (16 CFR 1500.3(c)(6)).

Flash Point:	< 0 F (TCC)	Upper Explosive Limit:	9.0
Autoignition Temperature:	489 F	Lower Explosive Limit:	1.7

Suitable Extinguishing Media: Class B fire extinguishers, dry chemical, foam or CO_2

Products of Combustion: fumes, smoke and carbon monoxide

Protection of Fire-Fighters: Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water fog or spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition. Do not spray water directly on fire; product will float and could be reignited on surface of water.

Section 6: Accidental Release Measures

Personal Precautions: Use personal protection recommended in Section 8.

Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush into sewers or storm drains.

Methods for Containment & Clean-up: Dike area to contain spill. Remove all sources of ignition. Ventilate the area with fresh air. If in confined space or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Recover or absorb spilled material using an absorbent designed for chemical spills. Place used absorbents into proper waste containers.

Section 7: Handling and Storage

Handling Procedures: Use proper grounding and bonding procedures for transferring materials. Do not use product near any source of ignition. Do not touch container to electrical sources as container will conduct electricity. Avoid contact with eyes and skin. Avoid breathing vapors.

Storage Procedures: Store in a cool dry area out of direct sunlight. Aerosol cans must be maintained below 120 F to prevent cans from rupturing.

Aerosol Storage Level: III

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

	OSHA		ACGIH		OTHER		
COMPONENT	TWA	STEL	TWA	STEL	TWA	SOURCE	UNIT
Hexane isomers	500(v)	1000(v)	500	1000	NE		ppm
n-Hexane	500	NE	50(s)	NE	NE		ppm
Synthetic isoparaffinic hydrocarbon	NE	NE	NE	NE	NE		
Methanol	200	250 (v)	200	250	NE		ppm
Carbon dioxide	5000	30000(v)	5000	30000	NE		ppm
N.E. – Not Established (c) – ceiling (s) – skin (v) – vacated							

Engineering Controls: Area should have ventilation to provide fresh air. Use local exhaust to prevent accumulation of vapors. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations

Respiratory Protection: None required for normal work where adequate ventilation is provided. Use a NIOSH-approved cartridge respirator with an organic vapor cartridge if vapors exceed exposure limits. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/face Protection: For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear splash-proof goggles.

Skin Protection: Use protective gloves such as nitrile, PVC or Viton. Also, use full protective clothing if there is prolonged or repeated contact of liquid with skin.

Section 9: Physical and Chemical Properties

Physical State: liquid
Color: clear, colorless
Odor: alcohol
Specific Gravity: 0.6699
Initial Boiling Point: 140 F
Freezing Point: < -76 F
Vapor Pressure: 160 mmHg @ 68 F
Vapor Density: > 1 (air = 1)
Evaporation Rate: 19 (Butyl acetate = 1)
Solubility: negligible in water
pH: NA
Volatile Organic Compounds: wt %: 95 g/L: 636.4 lbs./gal: 5.3

Section 10: Stability and Reactivity

Stability: Stable

Conditions to Avoid: sources of ignition, temperature extremes

Incompatible Materials: strong oxidizers

Hazardous Decomposition Products: oxides of carbon

Possibility of Hazardous Reactions: No

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

ACUTE EFFECTS

Component	Test	Result	Route	Species
n-hexane	LD50	28710 mg/kg	Oral	Rat
n-hexane	LD50	3000 mg/kg	Dermal	Rabbit
n-hexane	LC50	48000 ppm/4H	Inhalation	Rat

CHRONIC EFFECTS

Carcinogenicity:

	Component	Result
OSHA:	None listed	
IARC:	None listed	
NTP:	None listed	

Mutagenicity: No information available

Section 12: Ecological Information

Ecological studies have not been conducted for this product. The following information is available for components of this product.

Ecotoxicity:	n-hexane - 48 Hr EC50 water flea: 3.87 mg/L 96 Hr LC50 Lepomis macrochirus: 4.12 mg/L
Persistence / Degradability:	No information available
Bioaccumulation / Accumulation:	No information available
Mobility in Environment:	No information available

Section 13: Disposal Considerations

Disposal: The dispensed liquid product is a RCRA hazardous waste for the characteristic of ignitability with a waste code of D001 (See 40 CFR Part 261.20 – 261.33).
Aerosol containers should be emptied and depressurized before disposal. Empty containers may be recycled. Any liquid product should be managed as a hazardous waste.

All disposal activities must comply with federal, state and local regulations. Local regulations may be more stringent than state or national requirements.

Section 14: Transport Information

Proper shipping description:

US DOT (ground): Consumer Commodity, ORM-D

Special Provisions: None

Section 15: Regulatory Information

U.S. Federal

Toxic Substances Control Act (TSCA):

All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):

Reportable Quantities (RQ's) exist for the following ingredients: n-hexane (5000 lbs)
methanol (5000 lbs)

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Superfund Amendments Reauthorization Act (SARA) Title III:

Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:	Fire Hazard	Yes
	Reactive Hazard	No
	Release of Pressure	Yes
	Acute Health Hazard	Yes
	Chronic Health Hazard	Yes

Section 313 Toxic Chemicals: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:
n-hexane (6.1%), methanol (0.9%)

Clean Air Act:

Section 112 Hazardous Air Pollutants (HAPs): n-hexane, methanol

State Regulations

California Safe Drinking Water and Toxic Enforcement Act (Prop 65):

This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: NONE

State Right to Know:

New Jersey:	75-83-2, 110-54-3, 79-29-8, 67-56-1, 124-38-9
Pennsylvania:	107-83-5, 75-83-2, 110-54-3, 79-29-8, 67-56-1, 124-38-9
Massachusetts:	107-83-5, 75-83-2, 110-54-3, 79-29-8, 67-56-1, 124-38-9
Rhode Island :	110-54-3, 67-56-1, 124-38-9

Additional Regulatory Information: None

Section 16: Other Information

NFPA:	Health:	2	Flammability:	3	Reactivity:	0		
HMIS:	Health:	2	Flammability:	3	Reactivity:	0	PPE:	B

Prepared By: Michelle Rudnick
CRC #: 599C
Revision Date: 6/06/2006

Changes since last revision: MSDS reformatted in accordance with ANSI Z400.1-2004

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label.

CAS:	Chemical Abstract Service	NA:	Not Applicable
ppm:	Parts per Million	ND:	Not Determined
TCC:	Tag Closed Cup	NE:	Not Established
PMCC:	Pensky-Martens Closed Cup	g/L:	grams per Liter
PPE:	Personal Protection Equipment	lbs./gal:	pounds per gallon
TWA:	Time Weighted Average	STEL:	Short Term Exposure Limit
OSHA:	Occupational Safety and Health Administration		
ACGIH	American Conference of Governmental Industrial Hygienists		
NIOSH	National Institute of Occupational Safety & Health		

MATERIAL SAFETY DATA SHEET

EPA Reg. No. 1839-83-1658 **EPA Est. No. 1658-MO-1**

NFPA RATING: Health = 1, Flammability = 2, Reactivity = 0
HMIS RATING: Health = 1, Flammability = 2, Reactivity = 0

SECTION I – IDENTITY AND MANUFACTURER'S INFORMATION *(538N-57A)

Distributor: HILLYARD INDUSTRIES
Address: 302 North Fourth Street
St. Joseph, MO 64501

Product Name: **QT-TB**
Date Prepared: March 23, 2010 (version 2)
Prepared by: Regulatory Affairs Department

Emergency Telephone No.: (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.) **Other information calls:** (816) 233-1321 (Ext. 8285)
http://www.hillyard.com

SECTION II – INGREDIENTS/IDENTITY INFORMATION

Components (Specific Chemical Identity: Common Name(s):	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Diethylene Glycol Monobutyl Ether*(1)	112-34-5	N/E	N/E	N/A	5-10
EDTA Tetrasodium Salt	64-02-8	N/E	N/E	N/A	1-3
Water	7732-18-5	none	none	N/A	----

(1) Regulated by the following states: OH and PA.
* This product contains the following chemical subject to reporting requirements of SARA Title III, Section 313 and 40 CFR Part 372: Diethylene Glycol Monobutyl Ether.

SECTION III – PHYSICAL / CHEMICAL CHARACTERISTICS

***Boiling Point:** 210ºF
***Vapor Pressure (mm Hg.):** 17.36
***Vapor Density (AIR = 1):** 1.03
Solubility in Water: Complete
***pH =** 12 - 13

***Specific Gravity (H_2O = 1):** 1.0196 ***Density**=8.65 lb/gal.
***Percent Volatile by Weight (%):** greater than 97%
Evaporation Rate (ethyl ether = 1): slower than 1
Appearance and Odor: Clear liquid, lemon fragrance

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

Flash point: greater than 180°F (T.C.C.) **Flammable Limits:** LEL = N.E. UEL = N.E.
Extinguishing Media: Water, CO_2, foam or media suitable for surrounding fire.
Special Fire Fighting Procedures: Standard fire fighting procedures may be followed, including full protective gear, NIOSH approved self-contained breathing apparatus.
Unusual Fire and Explosion Hazards: None known to manufacturer.

SECTION V – PHYSICAL HAZARDS

Stability: Stable **Conditions to Avoid:** None known to manufacturer.
Incompatibility (Materials to Avoid): Do not mix with other chemicals.
Hazardous Decomposition Products or Byproducts: Thermal decomposition or burning may produce toxic vapors or gases.
Hazardous Polymerization: Will not occur **Conditions to Avoid:** None known to manufacturer.

*SECTION VI – HEALTH HAZARD DATA

Routes of entry: Inhalation? no Skin? yes Ingestion? yes
HEALTH HAZARDS (1. Acute and 2. Chronic)
1. **Acute:** Harmful if swallowed. Eye and skin irritant. 2. **Chronic:** None known to manufacturer.
Chemical listed as Carcinogen or Potential Carcinogen:
National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No
Signs and Symptoms of Exposure: Irritation or burning sensation.
Medical Conditions Generally Aggravated by Exposure: May aggravate skin disorders or respiratory ailments.

***HEALTH HAZARD DATA (CONTINUED)**

Emergency and First Aid Procedures: Eye Contact: Flush immediately with water for 15 minutes. Get medical attention. **Skin Contact:** Flush with water for 15 minutes. Remove and wash contaminated clothing. **If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice. **Ingestion:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person**. Note to physician:** Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled: Wear appropriate protective equipment. If possible, contain spill and collect in an approved container. Rinse affected area thoroughly with water. Keep product out of sewers or waterways. Hold for disposal.

Waste Disposal Method: Dispose of in accordance with applicable local, state, and federal regulations. If possible, triple rinse container and recycle.

Precautions To Be Taken In Handling And Storing: Avoid contact with skin or eyes. Avoid breathing vapor, spray or mist. Store in original container, in cool dry place with adequate ventilation. Keep out of reach of children. Keep container tightly closed when not in use.

Other Precautions: Use only according to label directions. If unsure about safe use, contact your supervisor immediately.

SECTION VIII – CONTROL MEASURES

Respiratory Protection (Specify Type): Not expected to be necessary under normal conditions of use. Where exposure cannot be adequately controlled by general or local ventilation, use appropriate respiratory protection to prevent over exposure. An approved dust/mist respirator would be recommended.

Ventilation: Local Exhaust = As necessary Mechanical (General) = Adequate Special = N.A. Other = N.A.

Protective Gloves: Water impervious (Latex, Neoprene)

Eye Protection: Chemical Resistant Goggles or Face Shield.

Other Protective Clothing or Equipment: Not Required.

Work / Hygienic Practices: Follow OSHA mandated procedures. Never eat or smoke while working with chemicals. Good housekeeping practices apply. Wash thoroughly after handling.

SECTION IX – TRANSPORTATION INFORMATION

Applicable regulations: 49 CFR = no; IMCO = no; IATA = no

Proper shipping name: Cleaning compound

UN No.: not applicable **Limited Qty.:** not applicable **Hazard Class:** not applicable

Labels required: not required **DOT Exception:** not applicable

EPA Hazardous waste number / code: not listed

Hazardous waste characteristics:

Ignitability = not applicable; Corrosivity = not applicable; Reactivity = not applicable

DISCLAIMER OF WARRANTIES

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.

The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate.

THE BUYER OR USER ASSUMES ALL RISKS ASSOCIATED WITH THE USE, MISUSE OR DISPOSAL OF THIS PRODUCT. THE BUYER OR USER IS RESPONSIBLE TO COMPLY WITH ALL FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING THE USE, MISUSE OR DISPOSAL OF THESE PRODUCTS.

Version 2, * Denotes revisions since last published MSDS. Supersedes Version 1 December 31, 1998

Material Safety Data Sheet

Material Name: Quaker State ATF+3 **ID: QS-216**

* * * Section 1 - Chemical Product and Company Identification * * *

Product Numbers: 406748 (12/1 Qt); 406709 (16 Gal Keg); 406710 (55 Gal Drum)
Chemical Name: Petroleum Distillate Mixture
Product Use: Automatic Transmission Fluid
Manufacturer Information

Quaker State Corporation
225 E. John Carpenter Freeway
Irving, Texas 75062

Phone: (800)562-5928

Emergency # (800)424-9300 CHEMTREC

General Comments

CHEMTREC Emergency telephone number is to be used in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals. All non-emergency questions should be directed to customer service.

* * * Section 2 - Composition / Information on Ingredients * * *

CAS #	Component	Percent
Not Available	Polymethacrylate	5-10
Not Available	Zinc dialkylphenyldithiophosphate	<2
68783-96-0	Calcium sulfonate	<2
64742-88-7	Solvent naphtha (petroleum), medium aliphatic	1-3
72623-83-7	Lubricating oils (petroleum), c>25,hydrotreated bright stock	Blend
64742-65-0	Petroleum distillates, solvent dewaxed heavy paraffinic	Blend
64742-62-7	Residual oils (petroleum), solvent dewaxed	Blend
64742-58-1	Lubricating oils, petroleum, hydrotreated spent	Blend
64742-57-0	Residual oils (petroleum), hydrotreated	Blend
64742-54-7	Petroleum distillates, hydrotreated heavy paraffinic	Blend

Component Information/Information on Non-Hazardous Components

The maximum percentage of the petroleum distillate and/or residual oil blend contained in this product is: 92%
All mineral oils used in this product have been severely hydrotreated and/or solvent refined. This product is considered not hazardous under 29 CFR 1910.1200 (Hazard Communication).

* * * Section 3 - Hazards Identification * * *

Emergency Overview

Product is a red, non-flammable petroleum distillate mixture. Irritating and toxic vapors may be released upon combustion of product. Extinguish fire with carbon dioxide, dry chemical, foam or water fog. Oil mists may be irritating to the respiratory system and skin.

Hazard Statements

This product may be irritating to the eyes, respiratory system and skin. Pulmonary aspiration hazard if swallowed.

Potential Health Effects: Eyes

This product may cause irritation to the eyes.

Potential Health Effects: Skin

Prolonged and/or repeated skin contact with this product may cause irritation / dermatitis.

Potential Health Effects: Ingestion

No significant adverse effects are expected upon ingestion of the product. Ingestion of this product may cause nausea, vomiting and diarrhea. Small amounts of this product, if aspirated into the lungs, may cause mild to severe pulmonary injury, possibly death.

Potential Health Effects: Inhalation

Low vapor pressure makes inhalation unlikely at standard temperatures and pressures. Inhalation of oil mists or fumes can cause irritation of the nose, throat and upper respiratory tract. Repeated and prolonged overexposure to oil mists may result in droplet deposition, oil granuloma formation, inflammation and increased incidence of infection.

HMIS Ratings: Health: 1 **Fire:** 1 **Reactivity:** 0 **Pers. Prot.:** gloves/safety glasses
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

* * * Section 4 - First Aid Measures * * *

First Aid: Eyes

Flush eyes with large amounts of water for 15 minutes. Get medical attention if eye irritation develops or persists.

First Aid: Skin

Remove contaminated clothing. For skin contact, wash immediately with soap and water. Get medical attention if skin disorder develops.

First Aid: Ingestion

If the material is swallowed, get immediate medical attention or advice -- Do not induce vomiting.

First Aid: Inhalation

If affected, remove individual to fresh air. If the affected person is not breathing, apply artificial respiration. Get medical attention if symptoms persist.

First Aid: Notes to Physician

Pulmonary aspiration hazard if swallowed; treat symptomatically.

* * * Section 5 - Fire Fighting Measures * * *

Flash Point: 401 ºF (205 ºC)
Method Used: Not available
Upper Flammable Limit (UFL): Not available
Lower Flammable Limit (LFL): Not available
Auto Ignition: Not available
Flammability Classification: Non-flammable
Rate of Burning: Not available

General Fire Hazards

Product is a non-flammable petroleum distillate mixture. Mist or sprays may be flammable below the products normal flash point.

Hazardous Combustion Products

Combustion products include fumes, smoke, oxides of zinc, oxides of phosphorus, carbon monoxide, carbon dioxide and other low molecular weight hydrocarbons.

Extinguishing Media

Dry chemical, foam, carbon dioxide, water fog. Use water to cool fire-exposed containers and to protect personnel. Direct water spray or foam may cause frothing and spattering. If a leak or spill has not ignited, use water spray to disperse vapors and to flush spills away from exposure.

Fire Fighting Equipment/Instructions

Firefighters should wear full-face, self contained breathing apparatus and impervious protective clothing. Firefighters should avoid inhaling any combustion products.

NFPA Ratings: Health: 1 **Fire:** 1 **Reactivity:** 0 **Other:**
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

* * * Section 6 - Accidental Release Measures * * *

Containment Procedures

Stop the flow of material, if this is without risk.

Clean-Up Procedures

Absorb with non-flammable suitable absorbent such as sand or earth. Scoop up used absorbent into drums or other appropriate container.

Evacuation Procedures

Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Special Procedures

Eliminate all sources of ignition or flammables that may come into contact with a spill of this material. Surfaces may become slippery after spillage. Wear appropriate protective equipment and clothing during clean-up. Do not allow the spilled product to enter public drainage systems or open water courses.

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Avoid prolonged or repeated skin contact with this material. Avoid the generation of oil mists. Wash thoroughly after handling. Use this product with adequate ventilation.

Storage Procedures

Do not store near heat, sparks, open flame or strong oxidizing agents. Do not store this material in open or unlabeled containers. "Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Exposure Guidelines

A: General Product Information

If oil mists are generated, observe the OSHA exposure limit of 5 mg/m3; short term exposure limit of 10 mg/m3.

B: Component Exposure Limits

ACGIH, OSHA, and NIOSH have not developed exposure limits for any of this product's components.

Engineering Controls

Use general ventilation and use local exhaust, where possible, in confined or enclosed spaces. Additional area ventilation or local exhaust may be required to maintain air concentrations below recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Wear safety glasses. Wear chemical goggles or faceshield if splash or mist occurs.

Personal Protective Equipment: Skin

Use impervious gloves for prolonged contact. Wear oil-impervious garments if contact is unavoidable.

Personal Protective Equipment: Respiratory

If mist is generated (heating, spraying) and engineering controls are not sufficient, wear approved organic vapor respirator suitable for oil mist.

Personal Protective Equipment: General

Use good hygiene when handling petroleum product. Launder contaminated clothing before reuse. Excessive misting may cause slippery floors - wear appropriate footwear. Eye wash fountains are recommended.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance:	Red	**Odor:**	Not available
Physical State:	Liquid	**pH:**	Not available
Vapor Pressure:	Not available	**Vapor Density:**	Not available
Boiling Point:	Not available	**Melting Point:**	Not applicable
Solubility (H2O):	Not available	**Specific Gravity:**	0.85
Viscosity:	34.8 cSt @ 40 ºC; 7.50 cSt @ 100 ºC	**Pour Point:**	-46 ºC (-50 ºF)

Physical Properties: Additional Information

None.

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Chemical Stability

Stable

Chemical Stability: Conditions to Avoid

Avoid formation of mists.

Incompatibility

This product may react with strong oxidizing agents.

Hazardous Decomposition

Decomposition products include carbon dioxide, carbon monoxide and other low molecular weight hydrocarbons.

Hazardous Polymerization

Hazardous polymerization will not occur.

* * * Section 11 - Toxicological Information * * *

Acute Toxicity

A: General Product Information

No data available on the product as a whole. Based on similar materials, this product is expected to have a low order of acute oral and dermal toxicity, but minute amounts aspirated into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury and possibly death.

B: Component Analysis - LD50/LC50

Petroleum distillates, hydrotreated heavy paraffinic (64742-54-7)

Oral LD50 Rat: >15 gm/kg

Dermal LD50 Rabbit: >5 gm/kg

Carcinogenicity

A: General Product Information

No data available on the product as a whole.

B: Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

Epidemiology

No data available for product.

Neurotoxicity

No data available on this product as a whole.

Mutagenicity

No data available on this product as a whole.

Teratogenicity

No data available for this product as a whole.

Other Toxicological Information

This product contains a blend of petroleum distillates and residual oils, all of which have been solvent refined or severely hydrotreated. The petroleum distillate and residual oil blend consists of one or more of the components identified by CAS Number in Section 2. Since these components vary with the availability of materials their presence is noted as "blend".

* * * Section 12 - Ecological Information * * *

Ecotoxicity

No information is available on ecotoxicity of this product.

Environmental Fate

No information is available. Keep product out of sewers and waterways.

* * * Section 13 - Disposal Considerations * * *

US EPA Waste Number & Descriptions

A: General Product Information

Product as shipped does not meet the definition or characteristics of a hazardous waste.

B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. Do not allow this material to drain into sewers/water supplies. Material should be recycled if possible.

* * * Section 14 - Transportation Information * * *

US DOT Information

Shipping Name: Not regulated as a hazardous material
Hazard Class: Not classified
UN/NA #: Not classified
Packing Group: Not classified
Required Label(s): None
Additional Info.: None

International Transportation Regulations

Not regulated as dangerous goods.

* * * Section 15 - Regulatory Information * * *

US Federal Regulations

A: General Product Information

This product may be classified as an oil under Section 311 of the Clean Water Act, and under the Oil Pollution Act. Discharges of spills into or leading to surface waters that cause sheen must be reported to the National Response Center. (1-800-424-8802)

B: Component Analysis

None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

State Regulations

A: General Product Information

Other state regulations may apply.

B: Component Analysis - State

None of this product's components are listed on the state lists from CA, FL, MA, MN, NJ, or PA.

Other Regulations

A: General Product Information

No additional information.

B: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS
Calcium sulfonate	68783-96-0	Yes	Yes	Yes
Solvent naphtha (petroleum), medium aliphatic	64742-88-7	Yes	Yes	Yes
Petroleum distillates, solvent dewaxed heavy paraffinic	64742-65-0	Yes	Yes	Yes
Petroleum distillates, hydrotreated heavy paraffinic	64742-54-7	Yes	Yes	Yes
Residual oils (petroleum), hydrotreated	64742-57-0	Yes	Yes	Yes
Lubricating oils (petroleum), c>25,hydrotreated bright stock	72623-83-7	Yes	Yes	Yes
Lubricating oils, petroleum, hydrotreated spent	64742-58-1	Yes	Yes	Yes
Residual oils (petroleum), solvent dewaxed	64742-62-7	Yes	Yes	Yes

C: Component Analysis - WHMIS IDL

No components are listed in the WHMIS IDL.

* * * Section 16 - Other Information * * *

Other Information

This information is, to the best of Quaker State Corporation's knowledge and belief, accurate and reliable. However, no representation, warranty, or guarantee is made to its accuracy, reliability, or completeness. It is the user's responsibility to satisfy himself as to the suitableness and completeness of such information for his own particular use.

Material Safety Data Sheet

Material Name: Quaker State ATF+3 **ID: QS-216**

Key/Legend

N = No; Y = Yes; ppm - parts per million; mg/m3 = milligrams per cubic meter of air; ACGIH = American Conference of Governmental Industrial Hygienists; OSHA = Occupational Safety and Health Administration; TLV = Threshold Limit Value; NIOSH = National Institute of Occupational Safety and Health; NTP = National Toxicology Program; IARC = International Agency for Research on Cancer.

MSDS History

Preparation Information: New MSDS 04/22/98.

Contact: Vince Bernard, Corporate Safety Director

Contact Phone: (800) 562-5928

This is the end of MSDS # QS-216

MATERIAL SAFETY DATA SHEET

QUAKER STATE® HD SAE 30 4-CYCLE ENGINE OIL

1. PRODUCT AND COMPANY IDENTIFICATION

MSDS Number: 25610
Version Date: 05/10/02

Product Name: QUAKER STATE® HD SAE 30 4-CYCLE ENGINE OIL
Product Use: Engine oil
Synonyms: No information available

Company Information
SOPUS Products
P.O. Box 4427
Houston, TX 77210-4427
USA

Phone Numbers
Medical Emergency: 1-800-546-6040
Transportation Emergency (USA): 1-800-424-9300
Transportation Emergency (International): 1-703-527-3887 (Call Collect)
MSDS Assistance: 1-800-546-6227
Fax On Demand: 1-800-546-6227
Technical Assistance: 1-800-458-4998
Customer Service: 1-800-468-8397
Fax Number: 713-217-3181
Internet Address: www.MSDS.PZLQS.com

2. COMPONENT INFORMATION

Component	CAS No.	Weight Percent Range	Hazardous in Blend
BASE LUBRICATING OILS	MIXTURE	90 - 95	No
DETERGENT/INHIBITOR SYSTEM	MIXTURE	5 - 10	No
POUR POINT DEPRESSANT	MIXTURE	< 1	No

Under normal conditions of use or in a foreseeable emergency, this product does not meet the definition of a hazardous chemical when evaluated according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Other: No information available

3. HAZARDS IDENTIFICATION

Emergency and Hazards Overview
CAUTION: Contains Petroleum Lubricant. Repeated skin contact can cause skin disorders.

ATTENTION: Used motor oil is a possible skin cancer hazard based on animal data. Repeated exposure to oil mist in excess of the OSHA limit (5mg/m3) can result in accumulation of oil droplets in pulmonary tissue.

NFPA Ratings: **Health** 1 **Flammability** 1 **Reactivity** 0

Primary Route of Exposure: **Skin** X **Inhalation** -- **Eye** --

Health Effect Information

Eye Contact: This product is practically non-irritating to the eyes upon direct contact. Based on testing of similar products and/or components.

Skin Contact: Avoid skin contact. This product is minimally irritating to the skin upon direct contact. Based on testing of similar products and/or components. Prolonged or repeated contact may result in contact dermatitis which is characterized by dryness, chapping, and reddening. Prolonged or repeated contact may result in oil acne which is characterized by blackheads with possible secondary infection. Avoid prolonged and repeated skin contact with used motor oils. See Section 11 - Toxicological Information.

Inhalation: This product has a low vapor pressure and is not expected to present an inhalation hazard at ambient conditions. Caution should be taken to prevent aerosolization or misting of this product. On rare occasions, prolonged and repeated exposure to oil mist poses a risk of pulmonary disease such as chronic lung inflammation. Signs of respiratory effects vary with concentration and length of exposure and include nasal discharge, sore throat, coughing, bronchitis, pulmonary edema and difficulty breathing. Shortness of breath and cough are the most common symptoms.

Ingestion: Do not ingest. This product is relatively non-toxic by ingestion. This product has laxative properties and may result in abdominal cramps and diarrhea. Exposure to a large single dose, or repeated smaller doses, may lead to lung aspiration, which can lead to lipid pneumonia or chronic lung inflammation. These are low-grade, chronic localized tissue reactions.

Medical Conditions Aggravated by Exposure: Drying and chapping may make the skin more susceptible to other irritants, sensitizers and disease.

Other: No information available

4. FIRST AID INFORMATION

Eye Contact: Immediately flush eyes with large amounts of water and continue flushing until irritation subsides. If material is hot, treat for thermal burns and seek immediate medical attention.

Skin Contact: No treatment is necessary under ordinary circumstances. Remove contaminated clothing. Wash contaminated area thoroughly with soap and water. If redness or irritation occurs and persists, seek medical attention. If material is hot, submerge injured area in cold water. If victim is severely burned, remove to a hospital immediately.

Inhalation: This material has a low vapor pressure and is not expected to present an inhalation exposure at ambient conditions.

Ingestion: No treatment is necessary under ordinary circumstances. Do not induce vomiting. If victim exhibits signs of lung aspiration such as coughing or choking, seek immediate medical assistance.

Notes to Physician: No information available

Other: No information available

5. FIRE AND EXPLOSION INFORMATION

Flammable Properties

Flash Point: >350 F, >176.7 C **Test Method:** ASTM D-92 (C.O.C.)

Flammable Limits in Air

Upper Percent: No data available

Lower Percent: No data available

Autoignition Temperature: >800 F , >426.7 C **Test Method:** No information available

NFPA Classification: Class III-B combustible liquid

Extinguishing Media: Use dry chemical, foam, or carbon dioxide.

Fire Fighting Measures

Special Fire Fighting Procedures and Equipment: Water may be ineffective but can be used to cool containers exposed to heat or flame to prevent vapor pressure buildup and possible container rupture. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Unusual Fire and Explosion Conditions: Dense smoke may be generated while burning. Carbon monoxide, carbon dioxide, and other oxides may be generated as products of combustion.

Hazardous Combustion By-Products: None

Other: No information available

6. ACCIDENTAL RELEASE MEASURES

Personnel Safeguards: Consult Health Effect Information in Section 3, Personal Protection Information in Section 8, Fire and Explosion Information in Section 5, and Stability and Reactivity Information in Section 10.

Regulatory Notifications: Notify appropriate authorities of spill.

Containment and Clean up: Contain spill immediately. Do not allow spill to enter sewers or watercourses. Absorb with appropriate inert material such as sand, clay, etc. Large spills may be picked up using vacuum pumps, shovels, buckets, or other means and placed in drums or other suitable containers.

Other: No information available

7. HANDLING AND STORAGE INFORMATION

Handling: Fire extinguishers should be kept readily available. See NFPA 30 and OSHA 1910.106--Flammable and Combustible Liquids.

Storage: Do not transfer to unmarked containers. Store in closed containers away from heat, sparks, open flame, or oxidizing materials.

Empty Container Warnings

Drums: Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed. Empty containers retain product residue and can be dangerous.

Plastic: Empty container may retain product residues.

Other: No information available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION INFORMATION

Exposure Limits and Guidelines

This product does not contain any components with OSHA or ACGIH exposure limits.

Personal Protective Equipment

Eye/Face Protection: Eye protection is not required under conditions of normal use. If material is handled such that it could be splashed into eyes, wear plastic face shield or splash-proof safety goggles.

Skin Protection: No skin protection is required for single, short duration exposures. For prolonged or repeated exposures, use impervious clothing (boots, gloves, aprons, etc.) over parts of the body subject to exposure. If handling hot material, use insulated protective clothing (boots, gloves, aprons, etc.). Launder soiled clothes. Properly dispose of contaminated leather articles including shoes, which cannot be decontaminated.

Respiratory Protection: Respiratory protection is not required under conditions of normal use. If vapor or mist is generated when the material is heated or handled, use an organic vapor respirator with a dust and mist filter. All respirators must be NIOSH certified. Do not use compressed oxygen in hydrocarbon atmospheres.

Personal Hygiene: Consumption of food and beverage should be avoided in work areas where hydrocarbons are present. Always wash hands and face with soap and water before eating, drinking, or smoking.

Engineering Controls / Work Practices

Ventilation: If vapor or mist is generated when the material is heated or handled, adequate ventilation in accordance with good engineering practice must be provided to maintain concentrations below the specified exposure or flammable limits.

Other: The OSHA permissible exposure limit (PEL) and ACGIH threshold limit value (TLV) for oil mist is 5 mg/m3. Chronic exposures below 5 mg/m3 are without significant health risks. The ACGIH short-term exposure limit (STEL) for oil mist is 10 mg/m3.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Dark , opaque	
Odor: Petroleum	**Vapor Pressure:** No data available
Physical state: Liquid	**Vapor Density (air=1):** No data available
pH: No data available	**Percent Volatile by Volume:** No data available
Boiling Point: > 900 F, 482.2 C	**Volatile Organic Content:** No data available
Melting Point: No data available	**Molecular Weight:** No data available
Specific Gravity: 0.89	**Average Carbon Number:** No data available
Pour Point: 15 F, -9.4 C	**Viscosity @ 100 F:** No data available
	Viscosity @ 40 C: No data available
Solubility in Water: Insoluble in water, soluble in hydrocarbons	
Octanol / Water Coefficient: Log K_{ow} = No data available	

10. STABILITY AND REACTIVITY INFORMATION

Chemical Stability: Stable

Conditions to Avoid: High heat and open flames.

Incompatible Materials to Avoid: May react with strong oxidizing agents.

Other: No information available

11. TOXICOLOGICAL INFORMATION

Primary Eye Irritation: No information available

Primary Skin Irritation: No information available

Acute Dermal Toxicity: No information available

Subacute Dermal Toxicity: No information available

Dermal Sensitization: No information available

Inhalation Toxicity: No information available

Inhalation Sensitization: No information available

Oral Toxicity: No information available

Mutagenicity: No information available

Carcinogenicity: The International Agency for Research on Cancer (IARC) has concluded that there is inadequate data to evaluate the carcinogenicity to experimental animals of this class of product. IARC has concluded there is sufficient evidence that used gasoline-engine motor oils produce skin tumors in experimental animals. Also, IARC has determined this class of products belongs to Group 3-"not classifiable as to its carcinogenicity to humans".

Reproductive and Developmental Toxicity: No information available

Teratogenicity: No information available

Immunotoxicity: No information available

Neurotoxicity: No information available

Other: No information available

12. ECOLOGICAL INFORMATION

Aquatic Toxicity: No information available

Terrestrial Toxicity: No information available

Chemical Fate and Transport: No information available

Other: No information available

13. DISPOSAL INFORMATION

Regulatory Information: All disposals must comply with federal, state, and local regulations. The material, if spilled or discarded, may be a regulated waste. Refer to state and local regulations. Caution! If regulated solvents are used to clean up spilled material, the resulting waste mixture may be regulated. Department of Transportation (DOT) regulations may apply for transporting this material when spilled.

Waste Disposal Methods: Waste material may be landfilled or incinerated at an approved facility. Materials should be recycled if possible.

Other: No information available

14. TRANSPORTATION INFORMATION

U.S. Department of Transportation (DOT)
Highway / Rail (Bulk): Not Regulated
Highway / Rail (Non-Bulk): Not Regulated

For US shipments, US DOT law requires the shipper to determine the proper shipping description of the material that is being shipped. The shipping information and description contained in this section may not be suitable for all shipments of this material, but may help the shipper determine the proper shipping description for a particular shipment.

International Information

Vessel:	**IMDG Regulated:**	--	**IMDG Not Regulated:**	X
Air:	**ICAO Regulated:**	--	**ICAO Not Regulated:**	X

Other: No information available

15. Regulatory Information

Regulatory Lists Searched: The components listed in Section 2 of this MSDS were compared to substances that appear on the following regulatory lists. Each list is numerically identified. See Regulatory Search Results below.

Health & Safety: 10 - IARC carcinogen, 11 - NTP carcinogen, 12 - OSHA carcinogen, 15 - ACGIH TLV, 16 - OSHA PEL, 17 - NIOSH exposure limit, 20 - US DOT Appendix A, Hazardous substances, 22 - FDA 21 CFR Total food additives, 23 - NFPA 49 or 325

Environmental: 30 - CAA 1990 Hazardous air pollutants, 31 - CAA Ozone depletors, 33 - CAA HON rule, 34 - CAA Toxic substance for accidental release prevention, 35 - CAA Volatile organic compounds (VOC's) in SOCMI, 41 - CERCLA / SARA Section 302 extremely hazardous substances, 42 - CERCLA / SARA Section 313 emissions reporting, 43 - CWA Hazardous substances, 44 - CWA Priority pollutants, 45 - CWA Toxic pollutants, 46 - EPA Proposed test rule for hazardous air pollutants, 47 - RCRA Basis for listing - Appendix VII, 48 - RCRA waste, 49 - SDWA - (S)MCLs

International: 50 - Canada - WHMIS Classification of substance, 54 - Mexico - Drinking water - ecological criteria, 55 - Mexico - Wastewater discharges, 56 - US -TSCA Section (12)(b) - export notification

State Lists: 60 - CA - Proposition 65, 61 - FL - Substances, 62 - MI - Critical materials, 63 - MA - RTK, 64 - MA - Extraordinarily hazardous substances, 65 - MN - Hazardous substances, 66 - PA - RTK, 67 - NJ - RTK, 68 - NJ - Environmental hazardous substances, 69 - NJ - Special hazardous substances

Inventories: 80 - Canada - Domestic substances , 81 - European - EINECS, 82 - Japan - ENCS, 83 - Korea - Existing and evaluated chemical substances, 84 - US - TSCA , 85 - China Inventory

Regulatory Search Results:
No components appear on any of the regulatory lis ts searched.

U.S. TSCA Inventory: All components of this material are on the US TSCA Inventory.

SARA Section 313:

Chemical	CAS Number	Percent in Product
ZINC COMPOUNDS	MIXTURE	2.5
COPPER COMPOUNDS	NONE	1.5

IARC: No information available

SARA 311 / 312 Categories
Acute: -- **Chronic:** -- **Fire:** -- **Pressure:** -- **Reactive:** --
Not Regulated: X

Canadian WHMIS Classification
Not a controlled substance under WHMIS

European Union Classification
Hazard Symbols:
No classification recommended
Risk Phrases:
No classification recommended
Safety Phrases:
No classification recommended

Other: No information available

16. OTHER INFORMATION

Health and Environmental Label Language

WARNING: Continuous contact with used gasoline engine oils has caused skin cancer in animal tests.
ATTENTION: Prolonged or repeated skin contact may cause oil acne or dermatitis. Repeated exposure to oil mist in excess of the OSHA limit (5mg/m3 can result in accumulation of oil droplets in pulmonary tissue.

Precautionary Measures: Avoid prolonged or repeated contact with eyes, skin and clothing. Avoid generation and inhalation of oil mists.

First Aid: Skin Contact: Wash skin with soap and water. Launder soiled clothes and discard oil-soaked shoes. If irritation persists seek medical attention. Eye Contact: Flush with water. If irritation persists seek medical attention. Ingestion: Do not induce vomiting. In general, no treatment is necessary unless large quantities of product are ingested. If discomfort persists seek medical assistance.

Instructions in Case of Fire or Spill: In case of fire, use water fog, foam, dry chemical or carbon dioxide. Water spray may be ineffective, but can be used to cool containers. Do not use a direct stream of water. Material will float and can be reignited on surface of water.

Spill or Leak: Dike and contain spill. Do not use water; soak up with absorbent material such as clay, sand or other suitable material. Place in non-leaking container and seal tightly for proper disposal.

Contains: highly refined petroleum distillate, mixture; zinc compounds, mixture; polymer additives, mixture.

KEEP OUT OF REACH OF CHILDREN. (If intended for retail also)

MSDS Revisions
Previous Version Date: Not applicable, this MSDS is the first version.

Previous Version Information
No information available

Other
No information available

Prepared By:
SOPUS Products
P.O. Box 4427

Houston, TX 77210-4453 USA

Disclaimer of Warranty: The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used, SOPUS Products must rely upon the hazard evaluation of such components submitted by that product's manufacturer or importer. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information, the results to be obtained from the use thereof, or that any such use do not infringe any patent. Since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

SAFETY DATA SHEET
HILLYARD QUICK & CLEAN AIR SANITIZER HIL0109854

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : Hillyard Quick & Clean Air Sanitizer

EPA ID Number: 10807-432-1658

Material number : A00205FL

Manufacturer or supplier's details

Company : Zep Inc.

Address : 1310 Seaboard Industrial Blvd., NW
Atlanta, GA 30318

Telephone : 404-352-1680

Emergency telephone numbers		
For SDS Information	:	Compliance Services 1-877-428-9937
For a Medical Emergency	:	877-541-2016 Toll Free - All Calls Recorded
For a Transportation Emergency	:	CHEMTREC: 800-424-9300 - All Calls Recorded. In the District of Columbia 202-483-7616

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	Aerosol containing a liquefied gas
Colour	clear
Odour	alcohol-like

GHS Classification

Flammable aerosols : Category 2
Gases under pressure : Liquefied gas
Eye irritation : Category 2A

GHS Label element

Hazard pictograms :

Signal word : Warning

Hazard statements : H223 Flammable aerosol.
H280 Contains gas under pressure; may explode if heated.
H319 Causes serious eye irritation.

Precautionary statements : **Prevention:**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Pressurized container: Do not pierce or burn, even after use.

P264 Wash skin thoroughly after handling.
P280 Wear eye protection/ face protection.
Response:
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
Storage:
P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

Potential Health Effects

Carcinogenicity:

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical Name	CAS-No.	Concentration [%]
1,1-difluoroethane	75-37-6	>= 50 - < 70
ethanol	64-17-5	>= 20 - < 30
propan-2-ol	67-63-0	>= 1 - < 5
sodium nitrite	7632-00-0	>= 0.1 - < 1

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : Consult a physician after significant exposure.
If unconscious place in recovery position and seek medical advice.

In case of skin contact : If skin irritation persists, call a physician.
Wash off immediately with plenty of water for at least 15 minutes.

If on clothes, remove clothes.

In case of eye contact : Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
Rinse immediately with plenty of water for at least 15 minutes.

If swallowed : Keep respiratory tract clear.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.
Take victim immediately to hospital.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Carbon dioxide (CO2)
Alcohol-resistant foam
Dry chemical
Water spray jet

Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Carbon dioxide (CO2)
Carbon monoxide
Smoke
Fluorine compounds

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Further information : For safety reasons in case of fire, cans should be stored separately in closed containments.
Use a water spray to cool fully closed containers.

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.
Remove all sources of ignition.
Evacuate personnel to safe areas.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.

If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Sweep up or vacuum up spillage and collect in suitable container for disposal.
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Do not breathe vapours or spray mist.
Take precautionary measures against static discharges.
Provide sufficient air exchange and/or exhaust in work rooms.
Dispose of rinse water in accordance with local and national regulations.
Always replace cap after use.

Conditions for safe storage : BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects.
No smoking.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.
Keep in a dry, cool and well-ventilated place.

Materials to avoid : Store and keep away from, oxidizing agents and acids.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
1,1-difluoroethane	75-37-6	TWA	1,000 ppm	US WEEL
ethanol	64-17-5	TWA	1,000 ppm	ACGIH
		TWA	1,000 ppm 1,900 mg/m3	NIOSH REL
		TWA	1,000 ppm 1,900 mg/m3	OSHA Z-1
		TWA	1,000 ppm 1,900 mg/m3	OSHA P0
propan-2-ol	67-63-0	TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH
		TWA	400 ppm	NIOSH REL

			980 mg/m3	
		ST	500 ppm 1,225 mg/m3	NIOSH REL
		TWA	400 ppm 980 mg/m3	OSHA Z-1
		TWA	400 ppm 980 mg/m3	OSHA P0
		STEL	500 ppm 1,225 mg/m3	OSHA P0

Biological occupational exposure limits

Component	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
PROPAN-2-OL	67-63-0	Acetone	Urine	End of shift at end of workwee k	40 mg/l	ACGIH BEI

Personal protective equipment

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Hand protection
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Ensure that eyewash stations and safety showers are close to the workstation location.
Safety glasses

Skin and body protection : impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Aerosol containing a liquefied gas

Colour : clear

Odour : alcohol-like

Odour Threshold : no data available

pH : no data available

Melting point/freezing point : no data available

Boiling point : no data available

Flash point	:	not applicable
Evaporation rate	:	> 1 n-Butyl Acetate = 1.0
Flammability (solid, gas)	:	Flammable aerosol.
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	5,515 hPa (21.1 °C)
Relative vapour density	:	no data available
Density	:	no data available
Solubility(ies)		
Water solubility	:	soluble
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	not determined
Thermal decomposition	:	no data available
Viscosity		
Viscosity, kinematic	:	no data available
Heat of combustion	:	17.27 kJ/g

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Stable
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed. Vapours may form explosive mixture with air.
Conditions to avoid	:	Heat, flames and sparks. Extremes of temperature and direct sunlight.
Incompatible materials	:	Oxidizing agents Amines Bases Potassium
Hazardous decomposition products	:	Carbon monoxide Carbon dioxide (CO2) Hydrocarbons Nitrogen oxides (NOx) Hydrogen fluoride

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	:	Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method

Components:

1,1-difluoroethane:

Acute inhalation toxicity	:	LC50 mouse: 977,000 mg/l Exposure time: 2 h

ethanol:

Acute oral toxicity	:	LD50 Oral rat: 7,060 mg/kg
Acute inhalation toxicity	:	LC50 rat: 124.7 mg/l Exposure time: 4 h

propan-2-ol:

Acute oral toxicity	:	LD50 Oral rat: 4,396 mg/kg Method: Calculation method

Skin corrosion/irritation

Product:

Remarks: May cause skin irritation in susceptible persons.

Serious eye damage/eye irritation

Product:

Remarks: Severe eye irritation

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

Product:

Carcinogenicity - Assessment	:	Not classifiable as a human carcinogen.

Reproductive toxicity

no data available

1,1-difluoroethane:
ethanol:

propan-2-ol:
sodium nitrite:

STOT - single exposure

no data available

STOT - repeated exposure

no data available

Aspiration toxicity

no data available

Further information

Product:

Remarks: no data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

Product:

Partition coefficient: n-octanol/water	:	Remarks: no data available

Mobility in soil

no data available

Other adverse effects

no data available

Product:

Regulation	40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks	This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information	:	no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Dispose of in accordance with local regulations. The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

Transportation Regulation: 49 CFR (USA):
ORM-D, CONSUMER COMMODITY

Transportation Regulation: IMDG (Vessel):
UN1950, AEROSOLS, 2.1, - Limited quantity

Transportation Regulation: IATA (Cargo Air):
UN1950, Aerosols, flammable, 2.1, - Limited quantity

Transportation Regulation: IATA (Passenger Air):
UN1950, Aerosols, flammable, 2.1, - Limited quantity

Transportation Regulation: TDG (Canada):
UN1950, AEROSOLS, 2.1, - Limited quantity

SECTION 15. REGULATORY INFORMATION

This product is regulated under the United States Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).

Pesticide Labeling Information Required Under U.S. FIFRA Regulations
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:
CAUTION
Observe label precautions.

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
sodium nitrite	7632-00-0	100	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
ammonia, anhydrous	7664-41-7	100	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : Sudden Release of Pressure Hazard
Acute Health Hazard
Fire Hazard

SARA 302 : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65 This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

TSCA	On TSCA Inventory
DSL	This product contains one or several components that are not on the Canadian DSL nor NDSL.
AICS	Not in compliance with the inventory
NZIoC	Not in compliance with the inventory
PICCS	Not in compliance with the inventory
IECSC	Not in compliance with the inventory

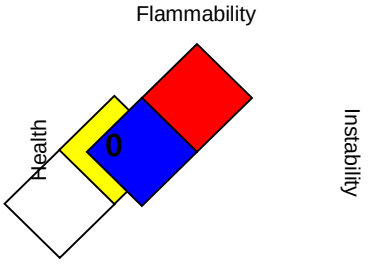
Inventory Acronym and Validity Area Legend:

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	3
FLAMMABILITY	3
PHYSICAL HAZARD	2

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

OSHA GHS Label Information:

Hazard pictograms :

Signal word : **Warning:**

Hazard statements : Flammable aerosol. Contains gas under pressure; may explode if heated. Causes serious eye irritation.

Precautionary statements :

Prevention: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Wash skin thoroughly after handling. Wear eye protection/ face protection.
Response: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/ attention.
Storage: Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

Version:	1.0
Revision Date:	05/31/2015
Print Date:	06/02/2015

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Zep Inc. markets products under well recognized and established brand names such as Zep®, Zep Commercial®,Zep Professional®, Enforcer®, National Chemical™, Selig™, Misty®, Next Dimension™, Petro®, i-Chem®, TimeMist®, TimeWick™, MicrobeMax®, Country Vet®, Konk®, Original Bike Spirits®, Blue Coral®, Black Magic®, Rain-X®, Niagara National™, FC Forward Chemicals®,Rexodan®, Mykal™, and a number of private labeled brands.

MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 2 Flammability = 0 Reactivity = 0
HMIS RATING: Health = 2 Flammability = 0 Reactivity = 0

SECTION I – IDENTITY AND MANUFACTURER'S INFORMATION (#519N-78A)

Manufacturer's Name: HILLYARD INDUSTRIES
Address: 302 North Fourth Street
St. Joseph, MO 64501
Product Name: **BASEBOARD STRIPPER GEL**
Date Prepared: July 1, 2010 (version 2)
Prepared by: Regulatory Affairs Department
Emergency Telephone No.: (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)
Other information calls: (816) 233-1321 (Ext. 8285)
http://www.hillyard.com

SECTION II – INGREDIENTS/IDENTITY INFORMATION

Components

(Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Ethanolamine (1)	141-43-5	3 ppm	3 ppm	N.A.	3-7%
Water	7732-18-5	none	none	N.A.	---
Alkali Surfactant	64072-46-3	N.E.	N.E.	N.A.	---
Benzyl Alcohol	100-51-6	N.E.	N.E.	N.A.	---
Ethylene Glycol Phenyl Ether	122-99-6	N.E.	N.E.	N.A.	---

(1) Regulated by OSHA, CT, FL, IL, LA, MA, NJ, PA, RI.
VOC (Concentrate) = 12%; VOC (min. dilution) =12%

SECTION III – PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 218ºF **Specific Gravity (H_2O = 1):** 25ºC = 1.01 ***Density**= 8.42 lb/gl.
Vapor Pressure (mm Hg.): 17.1 ***Percent Volatile by Weight (%):** 97 – 98%
Vapor Density (AIR = 1): 0.92 **Evaporation Rate (ethyl ether = 1):** slower than 1
Solubility in Water: Complete **Appearance and Odor:** Hazy, light amber, viscous liquid, non-objectionable odor
***pH (concentrate) =** 11 - 12
N.E. = Not Established N.A. = Not Applicable

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

Flash point: None (Tag Closed Cup) **Flammable Limits:** LEL = Not established UEL = Not established
Extinguishing Media: Carbon dioxide, dry chemical or foam (water spray to cool closed containers)
Special Fire Fighting Procedures: Self-contained breathing apparatus and protective clothing should be worn in fighting fires involving chemicals.
Unusual Fire and Explosion Hazards: None known to Hillyard.

SECTION V – PHYSICAL HAZARDS

Stability: Stable **Conditions to Avoid:** Heat, sparks and open flame
Incompatibility (Materials to Avoid): Keep away from strong oxidizers such as permanganate or strong oxides. Avoid contact with all acids, leather, wool, aluminum.
Hazardous Decomposition Products or Byproducts: During a fire, smoke may contain the original material in addition to unidentified toxic and/or irritating compounds.
Hazardous Polymerization: Will not occur **Conditions to Avoid:** N/A

SECTION VI -- HEALTH HAZARD DATA

Routes of entry: Inhalation? Yes Skin? Yes Ingestion? Yes
HEALTH HAZARDS (1. Acute and 2. Chronic)
1. Corrosive to all body tissue with which it comes in contact. Prolonged skin contact may consist of multiple areas of superficial destruction of the skin or dermatitis. Avoid prolonged exposure or repeated exposure to the skin. Excessive exposure to ethylene glycol phenyl ether may cause hemolysis thereby reducing the blood's ability to transport oxygen. No mortality when tested at 5 gm./kg oral ingestion study. 2. None known to Hillyard.
Chemical listed as Carcinogen or Potential Carcinogen:
National Toxicology Program = No **I.A.R.C. Monographs =** No **OSHA =** No

SECTION VI – HEALTH HAZARD DATA continued.

Signs and Symptoms of Exposure: Harmful if swallowed or absorbed through skin. Prolonged over exposure may irritate respiratory tract. Causes severe eye irritation. Can cause severe skin irritation if it remains on skin for more than one hour; test subjects showed necrosis after 4 hour exposure.

Medical Conditions Generally Aggravated by Exposure: May aggravate existing skin conditions such as dermatitis.

Emergency and First Aid Procedures: Inhalation: Remove person to fresh air. If breathing difficulty persists or occurs later, call a physician. **Eyes:** Immediately flush eyes with plenty of water for 15 minutes. Get prompt medical attention. **Skin:** Flush skin with plenty of water for 15 minutes. Remove and wash all contaminated clothing before reuse. **Ingestion:** Immediately give large amounts of water and CALL A PHYSICIAN, hospital emergency room, or poison control center.

SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled: Absorb large spills with floor dry material (see disposal below). Small spills: Flush with water and pick up with mop or wet vacuum.

Waste Disposal Method: Dispose of in accordance with state or local regulations. Do not dispose of in storm drains or streams; Monoethanolamine is toxic to fish and benzyl alcohol is toxic to birds and fish.

Precautions To Be Taken In Handling And Storing: Keep container closed when not in use. Since empty packages retain product residue, follow label warning even after package is empty. USE WITH ADEQUATE VENTILATION. Avoid prolonged breathing of vapors or spray mist. Open windows and doors, use exhaust fans or other means to **insure fresh air entry during application and drying.** Refer to OSHA STANDARD 29 CFR 1910.94 for technical guidelines on keeping air contamination below acceptable exposure limits. Do not take internally. Do not get in eyes, on skin, or on clothing. Protect eyes and skin when handling concentrate. Wash thoroughly after handling. Keep container closed when not in use. In case of spillage, absorb and dispose of in accordance with local applicable regulations.

SECTION VIII – CONTROL MEASURES

Respiratory Protection (Specify Type): Wear appropriate, properly fitted respirator (NIOSH or MSHA approved) unless air monitoring demonstrates vapor or mist levels are below applicable limits.

Ventilation: at least 10 air changes per hour recommended

Local Exhaust = recommended **Mechanical (General) =** recommended **Special =** N/A **Other =** N/A

Protective Gloves: impervious rubber gloves **Eye Protection:** chemical safety goggles

Other Protective Clothing or Equipment: protective clothing such as uniforms, coveralls.

Work / Hygienic Practices: Wash contaminated clothing before reuse (including shoes).

SECTION IX – TRANSPORTATION INFORMATION

DOT SHIPPING DESCRIPTION ON BILL OF LADING:

(Quart boxes) = Consumer Commodity ORM-D

Package Marking = Consumer Commodity ORM-D Label = None Hazard Class = not applicable

IMDG and IATA SHIPPING DESCRIPTION ON BILL OF LADING:

(Quart boxes) = Corrosive Liquid N.O.S., (Monoethanolamine), 8, UN 1760, PG II

Package Marking = Corrosive Liquid N.O.S., (Monoethanolamine), 8, UN 1760, PG II

Package Label = Corrosive Hazard Class = 8 Package Group = II

EPA Hazardous waste number/code: not listed

Hazardous waste characteristics: Ignitability = not applicable; Corrosivity = not applicable; Reactivity = not applicable

DISCLAIMER OF WARRANTIES

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.

The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate.

THE BUYER OR USER ASSUMES ALL RISKS ASSOCIATED WITH THE USE, MISUSE OR DISPOSAL OF THIS PRODUCT. THE BUYER OR USER IS RESPONSIBLE TO COMPLY WITH ALL FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING THE USE, MISUSE OR DISPOSAL OF THESE PRODUCTS.

Version 2, * Denotes revisions since last published MSDS. Supersedes Version 1 September 15, 2004

SAFETY DATA SHEET

1. Identification

Product identifier **DOUBLE DOWN**

Other means of identification

Product code HIL01040

Recommended use Carpet Cleaner

Recommended restrictions DO NOT USE ON ALUMINUM OR COPPER

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Manufacturer

Company name HILLYARD INDUSTRIES

Address 302 North Fourth St.
St. Joseph, MO 64501

Contact person Regulatory Affairs

Telephone number (816) 233-1321 (Ext. 8285)

Fax (816) 383-8485

E-mail regulatoryaffairs@hillyard.com

Emergency telephone # (800) 424-9300
(Only in the event of chemical emergency involving a spill, leak, fire, exposure, or accident involving chemicals.)

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Serious eye damage/eye irritation Category 2

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Signal word Warning

Hazard statement Causes serious eye irritation. May be harmful if swallowed.

Precautionary statement

Prevention Avoid contact with eyes Do not take internally. Wash thoroughly after handling. Wear eye/face protection.

Response If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Storage Store away from incompatible materials.

Disposal Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law in compliance with applicable federal, state and local requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Hydrogen Peroxide		7722-84-1	3 - < 5

Chemical name	Common name and synonyms	CAS number	%
Q3 Videt			1 - < 3
Sodium Carbonate, Anhydrous		497-19-8	1 - < 3
Other components below reportable levels			90 - 100

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion Rinse mouth. Drink plenty of water. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO_2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Avoid contact with eyes. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Hydrogen Peroxide (CAS 7722-84-1)	PEL	1.4 mg/m3
		1 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Hydrogen Peroxide (CAS 7722-84-1)	TWA	1 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Hydrogen Peroxide (CAS 7722-84-1)	TWA	1.4 mg/m3
		1 ppm

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as personal protective equipment

Eye/face protection Do not get in eyes. Chemical goggles are recommended.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other None normally required. If unable to avoid prolonged or repeated contact with skin, wear impervious clothing.

Respiratory protection Not normally required with adequate ventilation.

Thermal hazards None known.

General hygiene considerations Wash contaminated clothing before reuse. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance Clear, colorless liquid

Physical state Liquid.

Form Liquid.

Color Colorless

Odor non-objectionable odor

Odor threshold Not available.

pH 9 - 10

Melting point/freezing point Not applicable / Not available

Initial boiling point and boiling range 203 °F (95 °C)

Flash point > 200.0 °F (> 93.3 °C) Tag Closed Cup

Evaporation rate < 1 Ethyl ether = 1

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 17.6 mm Hg

Vapor density 0.62 Air=1

Relative density	1.04 at 77°F
Solubility(ies)	
Solubility (water)	100 %
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	8.66 lb/gal
Percent volatile	94 - 95 %
VOC (Weight %)	0 %

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Causes serious eye irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Information on toxicological effects

Acute toxicity

Product	Species	Test Results
DOUBLE DOWN		
Acute		
Inhalation		
LC50	Guinea pig	29.6296 mg/l, 2 Hours estimated
	Mouse	44.4444 mg/l, 2 Hours estimated
	Rat	170.3704 mg/l, 2 Hours estimated
Oral		
LD50	Rat	23655.5645 mg/kg estimated

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Hydrogen Peroxide (CAS 7722-84-1) 3 Not classifiable as to carcinogenicity to humans.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product		Species	Test Results
DOUBLE DOWN			
Aquatic			
Crustacea	EC50	Daphnia	11585.1582 mg/l, 48 hours estimated
Fish	LC50	Fish	46097.5508 mg/l, 96 hours estimated

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Waste from normal product use may be sewered to a public owned treatment works (POTW) in compliance with applicable Federal, State, and local pretreatment requirements.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Triple rinse (or equivalent). Then offer clean, dry container for recycling or reconditioning.

14. Transport information

DOT

Not regulated as dangerous goods.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Hydrogen Peroxide (CAS 7722-84-1) 1000 LBS

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity	Threshold planning quantity	Threshold planning quantity, lower value	Threshold planning quantity, upper value
Hydrogen Peroxide	7722-84-1	1000	1000 lbs		

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Hydrogen Peroxide (CAS 7722-84-1)

US. New Jersey Worker and Community Right-to-Know Act

Hydrogen Peroxide (CAS 7722-84-1)

US. Pennsylvania Worker and Community Right-to-Know Law

Hydrogen Peroxide (CAS 7722-84-1)

US. Rhode Island RTK

Hydrogen Peroxide (CAS 7722-84-1)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 04-09-2015

Version # 01

HMIS® ratings Health: 2
Flammability: 0
Physical hazard: 0

Disclaimer No representations or warranties, either express or implied, of merchantability, fitness for a particular purpose, or of any nature are made with respect to the product(s) or information contained in this material safety data sheet. The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate. The buyer or user assumes all risks associated with the use, misuse or disposal of this product. The buyer or user is responsible to comply with all federal, state or local regulations concerning the use, misuse or disposal of these products.

SAFETY DATA SHEET

Issuing Date 25-Feb-2014 **Revision Date** 07-Nov-2014 **Revision Number** 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

GHS product identifier

Product Name **Hillyard Quick & Clean® Germicidal Disinfectant Wipes**

Other means of identification

Product Code(s) **HIL01140**

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Germicidal Cleaner Wipes

Uses advised against None reasonably foreseeable

Supplier's details

Supplier Address
Hillyard Industries, Inc.
302 North Fourth Street (P.O. Box 909)
St. Joseph, MO 64502
1800-233-1321

Emergency telephone number

Emergency Telephone Number **IN CASE OF EMERGENCY, CALL 1-800-424-9300**
Poison Control Center: 1-800-222-1222

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200)

Skin Corrosion/Irritation	Category 1
Serious Eye Damage/Eye Irritation	Category 1

GHS Label elements, including precautionary statements

Emergency Overview

Signal Word **Danger**
Hazard Statements
• Causes severe skin burns and eye damage

Appearance Colorless **Physical State** Liquid. **Odor** Lemon, Lime

Precautionary Statements

Prevention
- Do not breathe dust/fume/gas/mist/vapors/spray
- Wash face, hands and any exposed skin thoroughly after handling
- Wear protective gloves/protective clothing/eye protection/face protection.

General Advice
- Immediately call a POISON CENTER or doctor/physician.

Eyes
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- Immediately call a POISON CENTER or doctor/physician.

Skin
- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
- Wash contaminated clothing before reuse.

Inhalation
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Ingestion
- IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Storage
- Store locked up.

Disposal
- Dispose of contents/container to an approved waste disposal plant.

Hazard Not Otherwise Classified (HNOC)

Not applicable

Other information

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade secret
Diethylene glycol monobutyl ether	112-34-5	5-10	*
Tetrasodium EDTA	64-02-8	1-5	*

**The exact percentage (concentration) of composition has been withheld as a trade secret.*

4. FIRST AID MEASURES

Description of necessary first-aid measures

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek immediate medical attention/advice.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

Inhalation Not an expected route of exposure. Move to fresh air. If symptoms arise, call a physician.

Ingestion Not an expected route of exposure. Large amounts: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.

Most important symptoms/effects, acute and delayed

Most Important Symptoms/Effects No information available.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media None

Specific Hazards Arising from the Chemical
No information available.

Hazardous Combustion Products Soot. Carbon dioxide (CO_2). Carbon monoxide. Hydrocarbons.

Explosion Data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Use water spray to cool surrounding containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid contact with the skin and the eyes. High risk of slipping due to leakage/spillage of product.

Environmental Precautions

Environmental Precautions Avoid release to the environment. Dispose of contents/container to an approved waste disposal plant. See Section 12 for additional Ecological Information. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system.

Methods and materials for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Small spillage: Wipe up with absorbent material (e.g. cloth, fleece) Large spillage: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Avoid contact with skin and eyes. Avoid breathing vapors or mists. Do not take internally. Do not smoke. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Keep container closed when not in use. Keep containers tightly closed in a cool, well-ventilated place. Keep out of the reach of children. Keep from freezing. Do not contaminate food or feed stuffs.

Incompatible Products Strong oxidizing agents.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection None required under normal usage. If direct contact possible: Safety glasses with side-shields.
Skin and Body Protection Impervious gloves.
Respiratory Protection None required under normal usage. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	**Appearance**	Colorless
Odor	Lemon, Lime	**Odor Threshold**	No information available

Property	Values	Remarks/ - Method
pH	11.7	None known
Melting Point/Range	No data available	None known
Boiling Point/Boiling Range	100 °C / 212 °F	None known
Flash Point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
upper flammability limit	No data available	
lower flammability limit	No data available	
Vapor Pressure	No data available	None known
Vapor Density	>1 (air = 1)	None known
Specific Gravity	1.009	None known
Water Solubility	Completely soluble	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition Temperature	No data available	None known
Decomposition Temperature	No data available	None known

Viscosity	No data available	None known
Flammable Properties	Not flammable	
Explosive Properties	No data available	
Oxidizing Properties	No data available	

Other information

VOC Content (%) 0.01%

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

Incompatible products.

Incompatible materials

Strong oxidizing agents.

Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO_2). Smoke Soot.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Not an expected route of exposure Overexposure: Vapors may irritate throat and respiratory system.
Eye Contact	Causes serious eye damage. Corrosive to the eyes and may cause severe damage including blindness. Eye contact with corrosive substances can cause eye burns.
Skin Contact	Corrosive. Skin contact with corrosive substances can cause skin burns. Causes severe skin burns.
Ingestion	Not an expected route of exposure. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Diethylene glycol monobutyl ether	= 3384 mg/kg (Rat)	= 2700 mg/kg (Rabbit)	-
Tetrasodium EDTA	10 g/kg (Rat)	-	-

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Delayed and immediate effects and also chronic effects from short and long term exposure

Sensitization No information available.
Mutagenic Effects No information available.
Carcinogenicity Contains no ingredients above reportable quantities listed as a carcinogen.

Reproductive Toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Aspiration Hazard No information available.

Numerical measures of toxicity - Product
The following values are calculated based on chapter 3.1 of the GHS document:
LD50 Oral 9273 mg/kg; Acute toxicity estimate
LD50 Dermal 33750 mg/kg; Acute toxicity estimate

12. ECOLOGICAL INFORMATION

Ecotoxicity
Harmful to aquatic life with long lasting effects.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Diethylene glycol monobutyl ether 112-34-5	EC50 96 h: > 100 mg/L (Desmodesmus subspicatus)	LC50 96 h: = 1300 mg/L static (Lepomis macrochirus)		EC50 24 h: = 2850 mg/L (Daphnia magna) EC50 48 h: > 100 mg/L (Daphnia magna)
Tetrasodium EDTA 64-02-8	EC50 72 h: = 1.01 mg/L (Desmodesmus subspicatus)	LC50 96 h: = 41 mg/L static (Lepomis macrochirus) LC50 96 h: = 59.8 mg/L static (Pimephales promelas)		EC50 24 h: = 610 mg/L (Daphnia magna)

Persistence and Degradability No information available.

Bioaccumulation No information available.

Other Adverse Effects
No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Dispose of in accordance with federal, state, and local regulations

Contaminated Packaging Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT Not regulated

15. REGULATORY INFORMATION

International Inventories
TSCA All components of this product are either listed or are exempt on the TSCA inventory.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Diethylene glycol monobutyl ether	112-34-5	5-10	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals: Ethyl alcohol is only considered a Proposition 65 developmental hazard when it is ingested as an alcoholic beverage.

Chemical Name	CAS-No	California Prop. 65
Ethyl alcohol	64-17-5	Developmental

U.S. State Right-to-Know Regulations

"X" designates that the ingredients are listed on the state right to know list.

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Diethylene glycol monobutyl ether	X		X	X	

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

NFPA	**Health Hazard**	3	**Flammability**	1	**Instability**	0	**Physical and Chemical Hazards**	-
HMIS	**Health Hazard**	3	**Flammability**	1	**Physical Hazard**	0	**Personal Protection**	X

Prepared By Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501
Issuing Date 25-Feb-2014
Revision Date 07-Nov-2014

Revision Note Initial Release.

General Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET

Revision Date 24-Sep-2013 **Revision Number** 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

GHS product identifier

Product Name **Hillyard Quick and Clean Graffiti Remover**

Other means of identification

Product Code(s) **HIL01064**

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Graffiti Remover

Uses advised against None reasonably foreseeable

Supplier's details

Supplier Address
Hillyard Industries, Inc.
302 North Fourth Street P.O. Box 909
St. Joseph, MO 64502
1-800-233-1321
www.hillyard.com

Emergency telephone number

Emergency Telephone Number 24 Hour Emergency Response 1-800-424-9300

Poison Control Center: 1-800-222-1222

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200)

Serious Eye Damage/Eye Irritation	Category 2
Specific Target Organ Systemic Toxicity (Single Exposure)	Category 3
Flammable liquids	Category 2

GHS Label elements, including precautionary statements

Emergency Overview

Signal Word **Danger**

Hazard Statements
- Causes serious eye irritation
- May cause drowsiness or dizziness
- Highly flammable liquid and vapor.

Appearance Colorless **Physical State** Liquid. **Odor** Plumeria

Precautionary Statements

Prevention

- Wash face, hands and any exposed skin thoroughly after handling
- Avoid breathing dust/fume/gas/mist/vapors/spray
- Use only outdoors or in a well-ventilated area
- Keep away from heat/sparks/open flames/hot surfaces - No smoking
- Keep container tightly closed
- Ground/bond container and receiving equipment
- Use explosion-proof electrical/ventilating/lighting/equipment
- Use only non-sparking tools
- Take precautionary measures against static discharge
- Wear protective gloves/protective clothing/eye protection/face protection
- Keep cool.

General Advice

- None

Eyes

- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- If eye irritation persists: Get medical advice/attention.

Skin

- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

Inhalation

- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- Call a POISON CENTER or doctor/physician if you feel unwell.

Fire

- In case of fire: Use CO_2, dry chemical, or foam for extinction.

Storage

- Store in a well-ventilated place. Keep container tightly closed
- Store locked up.

Disposal

- Dispose of contents/container to an approved waste disposal plant.

Hazard Not Otherwise Classified (HNOC)

Not applicable

Other information

Harmful to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade secret

Dimethyl adipate	627-93-0	10-30	*
Dimethyl glutarate	1119-40-0	10-30	*
Tripropylene glycol monomethyl ether	25498-49-1	10-30	*
Propylene glycol monomethyl ether	107-98-2	7-13	*
Acetone	67-64-1	5-10	*
2-Butoxyethanol	111-76-2	5-10	*
n-Amyl acetate	628-63-7	1-5	*
Dimethyl succinate	106-65-0	1-5	*

**The exact percentage (concentration) of composition has been withheld as a trade secret.*

4. FIRST AID MEASURES

Description of necessary first-aid measures

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If irritation persists, call a physician.

Skin Contact Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. In the case of skin irritation or allergic reactions see a physician.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. If symptoms persist, call a physician.

Ingestion Not an expected route of exposure. If swallowed: Call a physician or Poison Control Center immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed

Most Important Symptoms/Effects No information available.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Carbon dioxide (CO_2). Dry chemical. Water fog. Foam. Fire may float as if an oil fire.

Unsuitable Extinguishing Media None

Specific Hazards Arising from the Chemical
No information available.

Hazardous Combustion Products Soot. Smoke, Fume, Incomplete combustion products, Oxides of carbon

Explosion Data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters
Use water spray to cool surrounding containers. Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Environmental Precautions

Environmental Precautions Prevent entry into waterways, sewers, basements or confined areas. Avoid release to the environment. See Section 12 for additional Ecological Information Dispose of contents/container to an approved waste disposal plant.

Methods and materials for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Small spillage: Wipe up with absorbent material (e.g. cloth, fleece) Large spillage: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Avoid contact with skin, eyes and clothing. Do not smoke. Use only with adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Take precautionary measures against static discharges. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from open flames, hot surfaces and sources of ignition. Use only in an area containing flame proof equipment.

Conditions for safe storage, including any incompatibilities

Storage Store in cool/well-ventilated place. Keep out of the reach of children. Keep container closed when not in use. Keep away from heat and sources of ignition. Do not contaminate food or feed stuffs.

Incompatible Products Strong alkalis. Acids. Oxidizing agents. Alkali metal hydroxides.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Propylene glycol monomethyl ether 107-98-2	STEL: 150 ppm TWA: 100 ppm	(vacated) TWA: 100 ppm (vacated) TWA: 360 mg/m^3 (vacated) STEL: 150 ppm (vacated) STEL: 540 mg/m^3	TWA: 100 ppm TWA: 360 mg/m^3 STEL: 150 ppm STEL: 540 mg/m^3
Acetone 67-64-1	STEL: 750 ppm TWA: 500 ppm	TWA: 1000 ppm TWA: 2400 mg/m^3 (vacated) TWA: 750 ppm (vacated) TWA: 1800 mg/m^3 (vacated) STEL: 2400 mg/m^3 The acetone STEL does not apply to the cellulose acetate fiber industry. It is in effect for all other sectors (vacated) STEL: 1000 ppm	IDLH: 2500 ppm 10% LEL TWA: 250 ppm TWA: 590 mg/m^3
2-Butoxyethanol 111-76-2	TWA: 20 ppm	TWA: 50 ppm TWA: 240 mg/m^3 (vacated) TWA: 25 ppm (vacated) TWA: 120 mg/m^3 (vacated) S* S*	IDLH: 700 ppm TWA: 5 ppm TWA: 24 mg/m^3
n-Amyl acetate 628-63-7	STEL: 100 ppm TWA: 50 ppm	TWA: 100 ppm TWA: 525 mg/m^3 (vacated) TWA: 100 ppm (vacated) TWA: 525 mg/m^3	IDLH: 1000 ppm TWA: 100 ppm TWA: 525 mg/m^3

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection Risk of contact, wear: Safety glasses with side-shields.
Skin and Body Protection Risk of contact: Impervious gloves.
Respiratory Protection None required under normal usage. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State Liquid **Appearance** Colorless
Odor Plumeria **Odor Threshold** No information available

Property	Values	Remarks/ - Method
pH	6.3	None known
Melting Point/Range	No data available	None known
Boiling Point/Boiling Range	100 °C / 212 °F	None known
Flash Point	16.67 °C / 62 °F	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
upper flammability limit	No data available	
lower flammability limit	No data available	
Vapor Pressure	No data available	None known
Vapor Density	> 1	None known
Relative Density	No data available	None known
Specific Gravity	0.986	None known
Water Solubility	Miscible with water	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition Temperature	No data available	None known
Decomposition Temperature	No data available	None known
Viscosity	No data available	None known

Flammable Properties Highly flammable liquid and vapor.

Explosive Properties No data available
Oxidizing Properties No data available

Other information

VOC Content (%) 30

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

Incompatible products. Heat.

Incompatible materials

Strong alkalis. Acids. Oxidizing agents. Alkali metal hydroxides.

Hazardous decomposition products

Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke) Soot.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation May be harmful if inhaled.
Eye Contact Causes serious eye irritation. May cause eye irritation including redness, tearing, itching, and swollen eyes.
Skin Contact May cause irritation.
Ingestion Not an expected route of exposure. Harmful if swallowed.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Acetone	= 5800 mg/kg (Rat)	1700mg/kg (rabbit)	18892 mg/m^3
2-Butoxyethanol	= 470 mg/kg (Rat)	= 400 mg/kg (Rabbit) = 2270 mg/kg (Rat)	= 2.21 mg/L (Rat) 4 h = 450 ppm (Rat) 4 h
n-Amyl acetate	> 1600 mg/kg (Rat)	-	-

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Delayed and immediate effects and also chronic effects from short and long term exposure

Sensitization No information available.
Mutagenic Effects No information available.
Carcinogenicity Contains no ingredients above reportable quantities listed as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
2-Butoxyethanol	A3	Group 3		

ACGIH: (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen
IARC: (International Agency for Research on Cancer)
Group 3: Not Classifiable as to its Carcinogenicity to Humans

Reproductive Toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Aspiration Hazard No information available.

Numerical measures of toxicity - Product

The following values are calculated based on chapter 3.1 of the GHS document:

LD50 Oral 2190 mg/kg; Acute toxicity estimate
LD50 Dermal 5149 mg/kg; Acute toxicity estimate
Inhalation
gas 1581

dust/mist	5.9 mg/L; Acute toxicity estimate
Vapor	27 mg/L; Acute toxicity estimate

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Dimethyl glutarate 1119-40-0		LC50 96 h: 19.6-26.2 mg/L static (Pimephales promelas)		EC50 48 h: 122.1 - 163.5 mg/L (Daphnia magna)
Tripropylene glycol monomethyl ether 25498-49-1		LC50 96 h: = 11619 mg/L static (Pimephales promelas)		EC50 48 h: > 10 mg/L (Daphnia magna)
Propylene glycol monomethyl ether 107-98-2		LC50 96 h: 4600-10000 mg/L static (Leuciscus idus) LC50 96 h: = 20.8 g/L static (Pimephales promelas)		EC50 48 h: = 23300 mg/L (Daphnia magna)
Acetone 67-64-1		LC50 96 h: 4.74 - 6.33 mL/L (Oncorhynchus mykiss) LC50 96 h: 6210 - 8120 mg/L static (Pimephales promelas) LC50 96 h: = 8300 mg/L (Lepomis macrochirus)	EC50 = 14500 mg/L 15 min	EC50 48 h: 10294 - 17704 mg/L Static (Daphnia magna) EC50 48 h: 12600 - 12700 mg/L (Daphnia magna)
2-Butoxyethanol 111-76-2		LC50 96 h: = 1490 mg/L static (Lepomis macrochirus) LC50 96 h: = 2950 mg/L (Lepomis macrochirus)		EC50 24 h: 1698 - 1940 mg/L (Daphnia magna) EC50 48 h: > 1000 mg/L (Daphnia magna)
n-Amyl acetate 628-63-7		LC50 96 h: = 650 mg/L static (Lepomis macrochirus)		
Dimethyl succinate 106-65-0		LC50 96 h: 50-100 mg/L static (Brachydanio rerio)		

Persistence and Degradability No information available.

Bioaccumulation No information available.

Chemical Name	Log Pow
Propylene glycol monomethyl ether	-0.437
Acetone	-0.24
2-Butoxyethanol	0.81
Dimethyl succinate	0.19

Other Adverse Effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Dispose of in accordance with federal, state, and local regulations

Contaminated Packaging Do not re-use empty containers.

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Acetone - 67-64-1		Included in waste stream: F039		U002

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Acetone	Ignitable
n-Amyl acetate	Toxic Ignitable

14. TRANSPORT INFORMATION

DOT

Proper shipping name	Consumer commodity
Hazard Class	ORM-D
Description	Consumer commodity, ORM-D

15. REGULATORY INFORMATION

International Inventories

TSCA Complies

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Tripropylene glycol monomethyl ether	25498-49-1	10-30	1.0
2-Butoxyethanol	111-76-2	5-10	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
n-Amyl acetate	5000 lb			X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Acetone	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ
n-Amyl acetate	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

"X" designates that the ingredients are listed on the state right to know list.

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Tripropylene glycol monomethyl ether			X	X	
Propylene glycol monomethyl ether	X	X	X		X
Acetone	X	X	X		X
2-Butoxyethanol	X	X	X	X	X
n-Amyl acetate	X	X	X		X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

NFPA	**Health Hazard**	2	**Flammability**	3	**Instability**	0	**Physical and Chemical Hazards**	-
HMIS	**Health Hazard**	2	**Flammability**	3	**Physical Hazard**	0	**Personal Protection**	X

Prepared By Product Stewardship
23 British American Blvd.
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End of Safety Data Sheet

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : Hillyard Quick & Clean Gum-Go Chewing Gum and Candlewax Remover

Material number : A00183

Manufacturer or supplier's details

Company : Hillyard Industries

Address : 302 North 4th Street
Joseph, MO 64502

Telephone : 816-233-1321 ext 8285

Emergency telephone numbers		
For SDS Information	:	816-233-1321 ext 8285
For a Medical Emergency	:	
For a Transportation Emergency	:	CHEMTREC 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	Aerosol containing a liquefied gas
Colour	clear
Odour	odourless

GHS Classification

Flammable aerosols : Category 1
Gases under pressure : Liquefied gas

GHS Label element

Hazard pictograms :

Signal word : Danger

Hazard statements : H222 Extremely flammable aerosol.
H280 Contains gas under pressure; may explode if heated.

Precautionary statements : **Prevention:**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Pressurized container: Do not pierce or burn, even after use.
Storage:
P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

Potential Health Effects

Carcinogenicity:

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical Name	CAS-No.	Concentration [%]
butane	106-97-8	>= 70 - < 90
propane	74-98-6	>= 20 - < 30

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Get medical attention if irritation develops and persists.
Wash contaminated clothing before re-use.
Wash off immediately with plenty of water for at least 15 minutes.

In case of eye contact : Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
If in eyes, rinse with water for 15 minutes.

If swallowed : Keep respiratory tract clear.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical Water spray jet
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during firefighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Hazardous combustion products	:	Carbon dioxide (CO2) Carbon monoxide Smoke
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Further information	:	For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.
Special protective equipment for firefighters	:	Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep up or vacuum up spillage and collect in suitable container for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure.

Dispose of rinse water in accordance with local and national regulations.
Always replace cap after use.
Do not breathe vapours or spray mist.

Conditions for safe storage : BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects.
No smoking.
Observe label precautions.
Keep in a cool, well-ventilated place.
Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid : Strong oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
butane	106-97-8	TWA	800 ppm 1,900 mg/m3	NIOSH REL
		TWA	800 ppm 1,900 mg/m3	OSHA P0
propane	74-98-6	TWA	1,000 ppm	ACGIH
		TWA	1,000 ppm 1,800 mg/m3	NIOSH REL
		TWA	1,000 ppm 1,800 mg/m3	OSHA Z-1
		TWA	1,000 ppm 1,800 mg/m3	OSHA P0

Personal protective equipment

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment.

Hand protection
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles

Skin and body protection : impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : Wash hands before breaks and at the end of workday.
When using do not smoke.
When using do not eat or drink.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Aerosol containing a liquefied gas
Colour	:	clear
Odour	:	odourless
Odour Threshold	:	no data available
pH	:	not applicable
Melting point/freezing point	:	no data available
Boiling point	:	no data available
Flash point	:	no data available
Evaporation rate	:	no data available
Flammability (solid, gas)	:	Extremely flammable aerosol.
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	no data available
Relative vapour density	:	no data available
Density	:	no data available
Solubility(ies)		
Water solubility	:	negligible
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	not determined
Thermal decomposition	:	no data available
Viscosity		
Viscosity, kinematic	:	no data available
Heat of combustion	:	49.35 kJ/g

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Stable
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed. Vapours may form explosive mixture with air.

Conditions to avoid	:	Heat, flames and sparks. Extremes of temperature and direct sunlight.
Incompatible materials	:	Strong oxidizing agents
Hazardous decomposition products	:	Carbon oxides

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Components:

butane:

Acute inhalation toxicity	:	LC50 mouse: 1,237 mg/l Exposure time: 2 h
		LC50 rat: 1,355 mg/l

propane:

Acute inhalation toxicity	:	LC50 mouse: 1,237 mg/l Exposure time: 2 h
		LC50 rat: 658 mg/l Exposure time: 4 h
		LC50 rat: 1,355 mg/l

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

butane:
propane:

STOT - single exposure

no data available

STOT - repeated exposure

no data available

Aspiration toxicity

no data available

Further information

Product:

Remarks: no data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

Product:

Partition coefficient: n-octanol/water	:	Remarks: no data available

Components:

butane :

Partition coefficient: n-octanol/water	:	Pow: 2.89

Mobility in soil

no data available

Other adverse effects

no data available

Product:

Regulation	40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks	This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information	:	no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Dispose of in accordance with local regulations. Do not dispose of waste into sewer.

Do not contaminate ponds, waterways or ditches with chemical or used container.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

Transportation Regulation: 49 CFR (USA):
ORM-D, CONSUMER COMMODITY

Transportation Regulation: IMDG (Vessel):
UN1950, AEROSOLS, 2.1, - Limited quantity

Transportation Regulation: IATA (Cargo Air):
UN1950, Aerosols, flammable, 2.1, - Limited quantity

Transportation Regulation: IATA (Passenger Air):
UN1950, Aerosols, flammable, 2.1, - Limited quantity

Transportation Regulation: TDG (Canada):
UN1950, AEROSOLS, 2.1, - Limited quantity

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Sudden Release of Pressure Hazard
Fire Hazard

SARA 302 : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65 This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

TSCA	On TSCA Inventory
DSL	All components of this product are on the Canadian DSL.
AICS	On the inventory, or in compliance with the inventory
NZIoC	On the inventory, or in compliance with the inventory
PICCS	On the inventory, or in compliance with the inventory
IECSC	On the inventory, or in compliance with the inventory

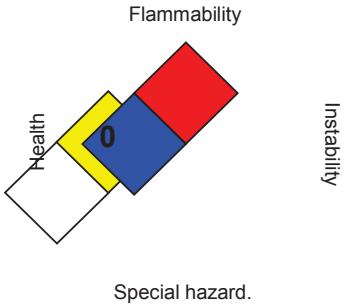
Inventory Acronym and Validity Area Legend:

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	**3**
FLAMMABILITY	**4**
PHYSICAL HAZARD	**2**

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

OSHA GHS Label Information:

Hazard pictograms :

Signal word : **Danger:**
Hazard statements : Extremely flammable aerosol. Contains gas under pressure; may explode if heated.
Precautionary statements :

Prevention: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use.

Storage: Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. Users should make their own investigations to determine the suitability and applicability of the information for their particular purposes.

This SDS has been prepared by the Compliance Services organization supporting this manufacturer, supplier or distributor.

1000850

MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND DISTRIBUTOR'S INFORMATION

NFPA Rating: Health-2; Flammability-1; Reactivity-0; Special--

HMIS Rating: Health-2; Flammability-1; Reactivity-0; Personal Protection-B

Manufactured For: Hillyard Industries, Inc.
Address: 302 N. 4th Street
Address: St. Joseph, MO 64501

DOT Hazard Classification: ORM-D
Identity (trade name as used on label)**:**
Gum-GO N.F. /Part # HIL0109054

Phone: **(816)-233-1321 ext. 8285** or http://www.hillyard.com

MSDS Number: A00185 Revision- 2

Emergency Response Number: Chemtrec 1-800-424-9300
NOTICE: JUDGMENT BASED ON INDIRECT TEST DATA

Date Prepared: 05/16/01 Prepared By: DL/IB
Information Calls: (770)422-2071

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
1,1,1,2-TETRAFLUOROETHANE	811-97-2	No	NE	NE	d

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/A

Specific Gravity (H2O=1): Concentrate Only = N/A

Vapor Pressure: PSIG @ 70°F (Aerosols): 80-100

Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A

Vapor Density (Air = 1): N/E

Evaporation Rate (= 1): N/E

Solubility in Water: None

Water Reactive: No

Appearance and Odor: Clear forceful spray, odorless.

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) NON-FLAMMABLE

Auto Ignition Temperature N/E

Flammability Limits in Air by % in Volume: % LEL: N/E % UEL: N/E

FLASH POINT AND METHOD USED (non-aerosols): N/A
SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus.

EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide.

Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture.

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY [X] STABLE [ ] UNSTABLE

HAZARDOUS POLYMERIZATION [ ] WILL [X] WILL NOT OCCUR

Incompatibility (Mat. to avoid): Strong oxidizing agents.

Conditions to Avoid: Open flame, welding arcs, heat, sparks.

Hazardous Decomposition Products: Carbon dioxide, carbon monoxide.

SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: [X] INHALATION [ ] INGESTION [ ] SKIN ABSORPTION [ ] EYE [ ] NOT HAZARDOUS

ACUTE EFFECTS

Inhalation: Excessive inhalation of vapors can cause central nervous system depression with dizziness, confusion, incoordination, drowsiness or unconsciousness.

Eye Contact: "Frostbite-like" effects may occur.

Skin Contact: "Frostbite-like" effects may occur.

Ingestion: Not a route of entry.

CHRONIC EFFECTS: (Effects due to excessive exposure to the raw materials of this mixture) Excessive inhalation of vapors can cause central nervous system depression with dizziness, confusion, incoordination, drowsiness or unconsciousness. Irregular heartbeat with a strange sensation in the chest, "heart thumping", apprehension, lightheadedness, feeling of fainting, dizziness, weakness, sometimes progressing to loss of consciousness and death. Suffocation, if air is displaced by vapors.

Medical Conditions Generally Aggravated by Exposure: Increased susceptibility to the effects of this material may be observed in persons with pre-existing disease of the central nervous system or cardiovascular system.

EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention.

Skin Contact: Flush with water for 15 minutes. Treat for frostbite if necessary by gently warming affected area. If irritated, seek medical attention.

Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.

Ingestion: Not a potential route of entry.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by NIOSH approved for organic vapor.

Protective Gloves: Neoprene

Eye Protection: Safety glasses recommended.

Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.

Other Protective Clothing & Equipment: None

Hygienic Work Practices: Wash with soap and water before handling food.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Absorb with suitable medium. Incinerate or landfill according to local, state or federal regulations. DO NOT FLUSH TO SEWER.

Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.

Precautions To Be Taken In Handling & Storage: Do not puncture or incinerate containers. Do not store at temperatures above 126°F. Avoid exposure to strong oxidizers.

Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN. Avoid food contamination.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

** Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only

SAFETY DATA SHEET

Issuing Date 23-Dec-2013 **Revision Date** 23-Dec-2013 **Revision Number** 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

GHS product identifier

Product Name **QUICK & CLEAN HAND SANITIZER WIPES**

Other means of identification

Product Code(s) **HIL01062**

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Hand Sanitizing Towel

Uses advised against None reasonably foreseeable

Supplier's details

Supplier Address
Hillyard Industries, Inc.
302 North Fourth Street (P.O. Box 909)
St. Joseph, MO 64502
1800-233-1321

Emergency telephone number

Emergency Telephone Number **IN CASE OF EMERGENCY, CALL 1-800-424-9300**
Poison Control Center: 1-800-222-1222

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200)

Flammable liquids	Category 3

GHS Label elements, including precautionary statements

Emergency Overview

Signal Word **Warning**
Hazard Statements
•
• Flammable liquid and vapor.

Appearance Slight haze to colorless **Physical State** Liquid. **Odor** Lemon, Alcohol

Precautionary Statements

Prevention

- Keep away from heat/sparks/open flames/hot surfaces - No smoking
- Keep container tightly closed
- Ground/bond container and receiving equipment
- Use explosion-proof electrical/ventilating/lighting/equipment
- Use only non-sparking tools
- Take precautionary measures against static discharge
- Wear protective gloves/protective clothing/eye protection/face protection.

General Advice

- None

Skin

- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

Fire

- In case of fire: Use CO2, dry chemical, or foam for extinction.

Storage

- Store in a well-ventilated place. Keep cool.

Disposal

- Dispose of contents/container to an approved waste disposal plant.

Hazard Not Otherwise Classified (HNOC)

Not applicable

Other information

Toxic to aquatic life.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade secret
Ethanol	64-17-5	10-30	*

**The exact percentage (concentration) of composition has been withheld as a trade secret.*

4. FIRST AID MEASURES

Description of necessary first-aid measures

Eye Contact Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.

Skin Contact None normally required. Wash skin with soap and water. If skin irritation or rash occurs: Get medical advice/attention.

Inhalation Not an expected route of exposure. Move to fresh air. If symptoms persist, call a physician.

Ingestion Not an expected route of exposure. If large quantities of this material are swallowed, call a physician immediately.

Most important symptoms/effects, acute and delayed

Most Important Symptoms/Effects Not expected to give rise to an acute hazard under normal condition of use.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Dry chemical. Carbon dioxide (CO_2). Foam.

Unsuitable Extinguishing Media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical
Vapors may travel to source of ignition and flash back.

Hazardous Combustion Products Nitrous oxide. Formaldehyde. Ammonia. Smoke, Fume, Incomplete combustion products, Oxides of carbon

Explosion Data

Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	Yes.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment. High risk of slipping due to leakage/spillage of product. Remove all sources of ignition.

Environmental Precautions

Environmental Precautions Prevent entry into waterways, sewers, basements or confined areas. Avoid release to the environment. See Section 12 for additional Ecological Information. Dispose of contents/container to an approved waste disposal plant.

Methods and materials for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Small spillage: Wipe up with absorbent material (e.g. cloth, fleece). Large spillage: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Avoid contact with eyes. Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities

Storage Keep container closed when not in use. Keep container tightly closed in a dry and well-ventilated place. Do not contaminate food or feed stuffs. Keep out of the reach of children. Keep away from heat and sources of ignition. Keep from freezing.

Incompatible Products Strong oxidizing agents.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethanol 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m^3 (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m^3	IDLH: 3300 ppm 10% LEL TWA: 1000 ppm TWA: 1900 mg/m^3

Appropriate engineering controls

Engineering Measures Eyewash stations.

Individual protection measures, such as personal protective equipment

Eye/Face Protection No special protective equipment required. Avoid contact with eyes.
Skin and Body Protection No special protective equipment required.
Respiratory Protection None required under normal usage. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State Liquid **Appearance** Slight haze to colorless
Odor Lemon, Alcohol **Odor Threshold** No information available

Property	Values	Remarks/ - Method
pH	6.2	None known
Melting Point/Range	No data available	None known
Boiling Point/Boiling Range	87.778 °C / 190 °F	None known
Flash Point	37.778 °C / 100 °F	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
upper flammability limit	No data available	
lower flammability limit	No data available	
Vapor Pressure	No data available	None known
Vapor Density	> 1 (air = 1)	None known
Relative Density	No data available	None known
Specific Gravity	0.970	None known
Water Solubility	Soluble in water.	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition Temperature	No data available	None known
Decomposition Temperature	No data available	None known

Viscosity	No data available	None known
Flammable Properties	Not flammable	
Explosive Properties	No data available	
Oxidizing Properties	No data available	

Other information

VOC Content (%) 18.49%

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

Ignitions sources - heat, sparks and open flames. Incompatible products.

Incompatible materials

Strong oxidizing agents.

Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO_2). Smoke. Soot. Nitrous oxide. Formaldehyde. Ammonia.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	May cause irritation of respiratory tract.
Eye Contact	Contact with eyes may cause irritation.
Skin Contact	No known hazard in contact with skin.
Ingestion	Not an expected route of exposure. May be harmful if swallowed.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethanol	= 7060 mg/kg (Rat)	-	= 124.7 mg/L (Rat) 4 h

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Delayed and immediate effects and also chronic effects from short and long term exposure

Sensitization No information available.
Mutagenic Effects No information available.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen. Ethanol has been shown to be carcinogenic in long-term studies only when consumed and abused as an alcoholic beverage.

Chemical Name	ACGIH	IARC	NTP	OSHA
Ethanol	A3	Group 1	Known	X

ACGIH: (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen
IARC: (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
NTP: (National Toxicity Program)
Known - Known Carcinogen
OSHA: (Occupational Safety & Health Administration)
X - Present

Reproductive Toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Aspiration Hazard No information available.

Numerical measures of toxicity - Product

The following values are calculated based on chapter 3.1 of the GHS document:

LD50 Oral 35279 mg/kg; Acute toxicity estimate
Inhalation
dust/mist 623.1 mg/L; Acute toxicity estimate

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Ethanol 64-17-5		LC50 96 h: 12.0 - 16.0 mL/L static (Oncorhynchus mykiss) LC50 96 h: > 100 mg/L static (Pimephales promelas) LC50 96 h: 13400 - 15100 mg/L flow-through (Pimephales promelas)	EC50 = 34634 mg/L 30 min EC50 = 35470 mg/L 5 min	LC50 48 h: 9268 - 14221 mg/L (Daphnia magna) EC50 24 h: = 10800 mg/L (Daphnia magna) EC50 48 h: = 2 mg/L Static (Daphnia magna)

Persistence and Degradability No information available.

Bioaccumulation No information available.

Chemical Name	Log Pow
Ethanol	-0.32

Other Adverse Effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Dispose of in accordance with federal, state, and local regulations

Contaminated Packaging Do not re-use empty containers.

Chemical Name	California Hazardous Waste
Ethanol	Toxic Ignitable

14. TRANSPORT INFORMATION

Note: Although this product meets the definition of UN3175, it is exempt as a small sealed article or packet containing <10ml of fully absorbed liquid. USDOT SP 47, UN SP 216, IATA/ICAO SP A46, TDG SP 56.

DOT Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA Complies

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals: Ethyl alcohol is only considered a Proposition 65 developmental hazard when it is ingested as an alcoholic beverage.

Chemical Name	CAS-No	California Prop. 65
Ethanol	64-17-5	Developmental

U.S. State Right-to-Know Regulations

"X" designates that the ingredients are listed on the state right to know list.

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island

Ethanol	X	X	X		
White mineral oil	X	X	X		X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

NFPA	**Health Hazard**	1	**Flammability**	2	**Instability**	0	**Physical and Chemical Hazards**	-
HMIS	**Health Hazard**	1	**Flammability**	2	**Physical Hazard**	0	**Personal Protection**	X

Prepared By Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Issuing Date 23-Dec-2013
Revision Date 23-Dec-2013
Revision Note Initial Release.

General Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET

Issuing Date 22-Oct-2013 **Revision Date** 07-Nov-2014 **Revision Number** 2

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

GHS product identifier

Product Name **QUICK & CLEAN HARD SURFACE DISINFECTANT WIPES**

Other means of identification

Product Code(s) **HIL01063**

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Disinfecting wipes

Uses advised against None reasonably foreseeable

Supplier's details

Supplier Address
Hillyard Industries, Inc.
302 North Fourth Street (P.O. Box 909)
St. Joseph, MO 64502
1800-233-1321

Emergency telephone number

Emergency Telephone Number **IN CASE OF EMERGENCY, CALL 1-800-424-9300**
Poison Control Center: 1-800-222-1222

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200)

Respiratory Sensitization	Category 1
Skin Sensitization	Category 1
Specific Target Organ Systemic Toxicity (Single Exposure)	Category 3

GHS Label elements, including precautionary statements

Emergency Overview

Signal Word **Danger**

Hazard Statements
• May cause allergy or asthma symptoms or breathing difficulties if inhaled
• May cause an allergic skin reaction
• May cause respiratory irritation. May cause drowsiness or dizziness

Appearance Colorless **Physical State** Liquid. **Odor** Floral

Precautionary Statements

Prevention
- Avoid breathing dust/fume/gas/mist/vapors/spray
- In case of inadequate ventilation wear respiratory protection
- Contaminated work clothing should not be allowed out of the workplace
- Wear protective gloves
- Use only outdoors or in a well-ventilated area.

General Advice
- None

Skin
- IF ON SKIN: Wash with plenty of soap and water
- If skin irritation or rash occurs: Get medical advice/attention
- Wash contaminated clothing before reuse.

Inhalation
- If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Storage
- Store in a well-ventilated place. Keep container tightly closed
- Store locked up.

Disposal
- Dispose of contents/container to an approved waste disposal plant.

Hazard Not Otherwise Classified (HNOC)

Not applicable

Other information
Harmful to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade secret
Isopropyl alcohol	67-63-0	0.1-1	*
Glutaraldehyde	111-30-8	0.1-1	*

**The exact percentage (concentration) of composition has been withheld as a trade secret.*

4. FIRST AID MEASURES

Description of necessary first-aid measures

Eye Contact Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.

Skin Contact Wash hands thoroughly after handling Remove and wash contaminated clothing before re-use. If skin irritation persists, call a physician.

Inhalation Not an expected route of exposure. Move to fresh air. If symptoms persist, call a physician.

Ingestion Not an expected route of exposure. If large quantities of this material are swallowed, call a physician immediately.

Most important symptoms/effects, acute and delayed

Most Important Symptoms/Effects No information available.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical
No information available.

Hazardous Combustion Products Carbon monoxide. Carbon dioxide (CO_2). Sulfur oxides. Soot.

Explosion Data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus and full protective gear. Use water spray to cool surrounding containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Ensure adequate ventilation.

Environmental Precautions

Environmental Precautions Avoid release to the environment. Dispose of contents/container to an approved waste disposal plant. See Section 12 for additional Ecological Information

Methods and materials for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Small spillage: Wipe up with absorbent material (e.g. cloth, fleece). Large spillage: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Do not breathe vapors or spray mist.

Conditions for safe storage, including any incompatibilities

Storage Keep container closed when not in use. Keep in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep from freezing. Do not contaminate food or feed stuffs.

Incompatible Products Strong oxidizing agents. Strong acids. Strong alkalis. Ketones Halogens. Halogenated compounds.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Isopropyl alcohol 67-63-0	STEL: 400 ppm TWA: 200 ppm	TWA: 400 ppm TWA: 980 mg/m^3 (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m^3 (vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m^3	IDLH: 2000 ppm 10% LEL TWA: 980 mg/m^3 TWA: 400 ppm STEL: 500 ppm STEL: 1225 mg/m^3
Glutaraldehyde 111-30-8	Ceiling: 0.05 ppm activated and inactivated	(vacated) Ceiling: 0.2 ppm (vacated) Ceiling: 0.8 mg/m^3	Ceiling: 0.2 ppm Ceiling: 0.8 mg/m^3

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection Safety glasses with side-shields. Goggles.
Skin and Body Protection If direct contact possible: Impervious gloves.
Respiratory Protection None required under normal usage. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State Liquid **Appearance** Colorless
Odor Floral **Odor Threshold** No information available

Property	Values	Remarks/ - Method
pH	4.0	None known
Melting Point/Range	No data available	None known
Boiling Point/Boiling Range	100 °C / 212 °F	None known
Flash Point	None.	PMCC,
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
upper flammability limit	No data available	
lower flammability limit	No data available	
Vapor Pressure	No data available	None known
Vapor Density	> 1	None known
Relative Density	No data available	None known
Specific Gravity	0.999	None known
Water Solubility	Completely soluble	None known

Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition Temperature	No data available	None known
Decomposition Temperature	No data available	None known
Viscosity	No data available	None known

Flammable Properties Not flammable

Explosive Properties No data available
Oxidizing Properties No data available

Other information

VOC Content (%) 1%

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

Incompatible products.

Incompatible materials

Strong oxidizing agents. Strong acids. Strong alkalis. Ketones Halogens. Halogenated compounds.

Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO_2). Hydrogen sulfide. Sulfur dioxide. Smoke. Soot.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Overexposure: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Eye Contact	Contact with eyes may cause irritation.
Skin Contact	May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
Ingestion	May be harmful if swallowed.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Isopropyl alcohol	= 4396 mg/kg (Rat)	12800 mg/kg (Rat) 12870 mg/kg (Rabbit)	72.6 mg/L (Rat) 4 h
Glutaraldehyde	= 66 mg/kg (Rat)	> 2000 mg/kg (Rat) = 560 µL/kg (Rabbit)	= 0.1 mg/L (Rat) 4 h

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Delayed and immediate effects and also chronic effects from short and long term exposure

Sensitization May cause sensitization by inhalation. May cause sensitization by skin contact.
Mutagenic Effects No information available.
Carcinogenicity Contains no ingredients above reportable quantities listed as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Isopropyl alcohol		Group 3		X

IARC: (International Agency for Research on Cancer)
Group 3: Not Classifiable as to its Carcinogenicity to Humans
OSHA: (Occupational Safety & Health Administration)
X - Present

Reproductive Toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Aspiration Hazard No information available.

Numerical measures of toxicity - Product

12. ECOLOGICAL INFORMATION

Ecotoxicity
Harmful to aquatic life with long lasting effects.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Isopropyl alcohol 67-63-0	EC50 96 h: > 1000 mg/L (Desmodesmus subspicatus) EC50 72 h: > 1000 mg/L (Desmodesmus subspicatus)	LC50 96 h: = 11130 mg/L static (Pimephales promelas) LC50 96 h: = 9640 mg/L flow-through (Pimephales promelas) LC50 96 h: > 1400000 µg/L (Lepomis macrochirus)		EC50 48 h: = 13299 mg/L (Daphnia magna)
Glutaraldehyde 111-30-8	EC50 72 h: = 0.61 mg/L (Desmodesmus subspicatus) EC50 96 h: = 0.84 mg/L (Desmodesmus subspicatus)	LC50 96 h: 2.6-4.8 mg/L flow-through (Oncorhynchus mykiss) LC50 96 h: 7.8-13 mg/L static (Oncorhynchus mykiss) LC50 96 h: 7.8-22 mg/L static (Lepomis macrochirus) LC50 96 h: = 5.4 mg/L static (Pimephales promelas)	EC50 = 13.3 mg/L 17 h EC50 = 76.0 mg/L 5 min	EC50 48 h: 0.56 - 1.0 mg/L Static (Daphnia magna) EC50 48 h: = 14 mg/L (Daphnia magna)

Persistence and Degradability No information available.

Bioaccumulation No information available.

Chemical Name	Log Pow
Isopropyl alcohol	0.05
Glutaraldehyde	0.22

Other Adverse Effects
No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Dispose of in accordance with federal, state, and local regulations

Contaminated Packaging Do not re-use empty containers.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Isopropyl alcohol	Toxic Ignitable
Glutaraldehyde	Toxic

14. TRANSPORT INFORMATION

DOT Not regulated

15. REGULATORY INFORMATION

International Inventories

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory. All components of this product are either listed or are exempt on the TSCA inventory.
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

Chemical Name	CAS-No	California Prop. 65
O-phenylphenol	90-43-7	Carcinogen

U.S. State Right-to-Know Regulations

"X" designates that the ingredients are listed on the state right to know list.

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Isopropyl alcohol	X	X	X		X
Glutaraldehyde	X	X	X		X

U.S. EPA Label Information

EPA Pesticide Registration Number 55195-4-11694

16. OTHER INFORMATION

NFPA	**Health Hazard**	2	**Flammability**	0	**Instability**	0	**Physical and Chemical Hazards**	-
HMIS	**Health Hazard**	2	**Flammability**	0	**Physical Hazard**	0	**Personal Protection**	X

Prepared By Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Issuing Date 22-Oct-2013

Revision Date 07-Nov-2014

Revision Note (M)SDS sections updated: 9.

General Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet

HILO103654

MATERIAL SAFETY DATA SHEET

Quick & Clean Jell Baseboard Stripper

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Quick & Clean Jell Baseboard Stripper
Product Number:	A00807
Product Use:	Wax Remover.
Manufacturer/Supplier:	HILLYARD INDUSTRIES 302 North Fourth Street, St. Joseph, MO 64502
Phone Number:	(816) 233-1321 (Ext, 8285)
D.O.T. Emergency Phone:	(800) 424-9300
Date of Preparation:	January 16, 2008 **Revision #:** 1.0

Section 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW **HMIS:** See Section 15

DANGER

CORROSIVE MATERIAL - CAUSES BURNS.
CONTENTS UNDER PRESSURE. CONTAINER MAY EXPLODE IF HEATED.

Potential Health Effects: See Section 11 for more information.

Likely Routes of Exposure: Skin contact, eye contact, inhalation, and ingestion.

Eye: Causes burns.

Skin: Causes burns.

Ingestion: Not a normal route of exposure. Harmful: may cause lung damage if swallowed.

Inhalation: May cause respiratory tract irritation. May cause asphyxiation. This product may be aspirated into the lungs and cause chemical pneumonitis.

Chronic Effects: Prolonged or repeated contact may dry skin and cause irritation.

Signs and Symptoms: Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. Symptoms may include redness, drying, defatting and cracking of the skin. Vapours may cause drowsiness and dizziness.

Medical Conditions Aggravated By Exposure: Asthma. Allergies.

Target Organs: Skin, eyes, gastrointestinal tract, respiratory system.

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential Environmental Effects: May cause long-term adverse effects in the aquatic environment. See Section 12 for more information.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS #	Wt. %
Ethylene glycol monobutyl ether	111-76-2	10 - 30
Isobutane	75-28-5	7 - 13
Monoethanolamine	141-43-5	1 - 5
Propane	74-98-6	1 - 5

Section 4: FIRST AID MEASURES

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get medical attention immediately.

Skin Contact: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

General Advice: In case of accident or if you feel unwell, seek medical advice immediately (show the label or MSDS where possible).

Note to Physicians: Symptoms may not appear immediately.

Section 5: FIRE FIGHTING MEASURES

Flammability: Not flammable by WHMIS/OSHA criteria.

Means of Extinction:

Suitable Extinguishing Media: Powder, water spray, foam, carbon dioxide.

Unsuitable Extinguishing Media: Not available.

Products of Combustion: May include, and are not limited to: oxides of carbon, oxides of nitrogen.

Explosion Data:

Sensitivity to Mechanical Impact: Not available.

Sensitivity to Static Discharge: Not available.

Protection of Firefighters: Containers may explode when heated. Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate sources of ignition. Ruptured cylinders may rocket.

Environmental Precautions: Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). This material is a water pollutant. Keep out of drains, sewers, ditches, and waterways. Minimize use of water to prevent environmental contamination.

Methods for Containment: Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for Clean-Up: Vacuum or sweep material and place in a disposal container. Allow gas to dissipate harmlessly into the atmosphere.

Other Information: Not available.

Section 7: HANDLING AND STORAGE

Handling:
Keep away from sources of ignition. - No smoking. Avoid contact with skin and eyes. Do not swallow. Do not breathe gas/fumes/vapor/spray. Use only in well-ventilated areas. Handle and open container with care. When using, do not eat or drink. Wash hands before eating, drinking, or smoking.

Storage:
Keep out of the reach of children. Keep container in a well-ventilated place. Do not store at temperatures above 49°C / 120°F.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Ingredient	Exposure Limits OSHA-PEL	ACGIH-TLV
Ethylene glycol monobutyl ether	50 ppm	20 ppm
Isobutane	Not available.	Not available.
Monoethanolamine	3 ppm	3 ppm
Propane	1000 ppm	1000 ppm

Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Personal Protective Equipment: **HMIS:** See Section 15

Eye/Face Protection: Wear eye/face protection.

Hand Protection: Wear suitable gloves.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment.

General Hygiene Considerations: Handle according to established industrial hygiene and safety practices.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Opaque.
Color:	Straw.
Odour:	Mint.
Odour Threshold:	Not available.
Physical State:	Gas/Pressurized Liquid.
pH:	12
Viscosity:	Not available.
Freezing Point:	Not available.
Boiling Point:	Not available.
Flash Point:	Not available.
Evaporation Rate:	Not available.
Lower Flammability Limit:	Not available.

Upper Flammability Limit:	Not available.
Vapor Pressure:	Not available.
Vapor Density:	Not available.
Specific Gravity:	0.990 (Liquid Concentrate)
Solubility in Water:	Complete.
Coefficient of Water/Oil Distribution:	Not available.
Auto-ignition Temperature:	Not available.
Percent Volatile, wt. %:	Not available.
VOC content, wt. %:	34.8% (US federal/CARB/OTC/LADCO)

Section 10: STABILITY AND REACTIVITY

Stability: Stable under normal storage conditions. Contents under pressure. Container may explode if heated. Do not puncture. Do not burn. Keep in a cool place.

Conditions of Reactivity: Heat. Incompatible materials.

Incompatible Materials: Acids. Alkaline metals. Copper.

Hazardous Decomposition Products: May include, and are not limited to: oxides of carbon, oxides of nitrogen.

Possibility of Hazardous Reactions: No dangerous reaction known under conditions of normal use.

Section 11: TOXICOLOGY INFORMATION

EFFECTS OF ACUTE EXPOSURE

Component Anaylsis

Ingredient	LD_{50} (oral)	LC_{50}
Ethylene glycol monobutyl ether	470 mg/kg, rat	450 ppm 4 hrs, rat
Isobutane	Not available.	Not available.
Monoethanolamine	1720 mg/kg, rat	Not available.
Propane	Not available.	Not available.

Eye: Causes burns. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Skin: Causes burns. Handling can cause dry skin.

Ingestion: Not a normal route of exposure. Harmful: may cause lung damage if swallowed.

Inhalation: May cause respiratory tract irritation. May cause asphyxiation. This product may be aspirated into the lungs and cause chemical pneumonitis. Vapours may cause drowsiness and dizziness.

EFFECTS OF CHRONIC EXPOSURE

Target Organs: Not available.

Chronic Effects: (Effects due to excessive exposure to the raw materials of this mixture) May cause nasal and respiratory irritation, diarrhea and vomiting. Lab animals have experienced anemia, liver, kidney, lung and blood damage due to Ethylene glycol monobutyl ether.

Carcinogenicity: Not hazardous by WHMIS/OSHA criteria.

Ingredient	Chemical Listed as Carcinogen or Potential Carcinogen *
Ethylene glycol monobutyl ether	Not listed.
Isobutane	Not listed.
Monoethanolamine	Not listed.
Propane	Not listed.

* See Section 15 for more information.

Mutagenicity: Not hazardous by WHMIS/OSHA criteria.

Reproductive Effects: Not hazardous by WHMIS/OSHA criteria.

Developmental Effects:

Teratogenicity: Not hazardous by WHMIS/OSHA criteria.

Embryotoxicity: Not hazardous by WHMIS/OSHA criteria.

Respiratory Sensitization: Not hazardous by WHMIS/OSHA criteria.

Skin Sensitization: Not hazardous by WHMIS/OSHA criteria.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: May cause long-term adverse effects in the aquatic environment

Persistence / Degradability: Not available.

Bioaccumulation / Accumulation: Not available.

Mobility in Environment: Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions:
This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

Section 14: TRANSPORTATION INFORMATION

DOT Classification
ORM-D

TDG Classification
Limited Quantity

Section 15: REGULATORY INFORMATION

Federal Regulations

Canadian: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

US: MSDS prepared pursuant to the Hazard Communication Standard (29 CFR 1910.1200).

SARA Title III

Ingredient	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313
Ethylene glycol monobutyl ether	Not listed.	Not listed.	Not listed.	Yes.
Isobutane	Not listed.	Not listed.	Not listed.	Not listed.
Monoethanolamine	Not listed.	Not listed.	Not listed.	Not listed.
Propane	Not listed.	Not listed.	Not listed.	Not listed.

State Regulations

California Proposition 65:
This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

Global Inventories

Ingredient	Canada DSL/NDSL	USA TSCA
Ethylene glycol monobutyl ether	DSL	Yes.
Isobutane	DSL	Yes.
Monoethanolamine	DSL	Yes.
Propane	DSL	Yes.

HMIS - Hazardous Materials Identification System

Health - 2 **Flammability** - 1 **Physical Hazard** - 0 **PPE** – B

NFPA - National Fire Protection Association:

Health - 2 **Fire** - 1 **Reactivity** - 0

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

WHMIS Classification(s):
Class A - Compressed Gas
Class E - Corrosive Material

WHMIS Hazard Symbols:

SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

OSHA (O) Occupational Safety and Health Administration.

ACGIH (G) American Conference of Governmental Industrial Hygienists.
A1 - Confirmed human carcinogen.
A2 - Suspected human carcinogen.
A3 - Animal carcinogen.
A4 - Not classifiable as a human carcinogen.
A5 - Not suspected as a human carcinogen.

IARC (I) International Agency for Research on Cancer.
1 - The agent (mixture) is carcinogenic to humans.
2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

NTP (N) National Toxicology Program.
1 - Known to be carcinogens.
2 - Reasonably anticipated to be carcinogens.

Section 16: OTHER INFORMATION

Disclaimer:
We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

Expiry Date: January 16, 2011

Prepared by: Nexreg Compliance Inc.
Prepared for: HILLYARD INDUSTRIES
(816) 233-1321 (Ext, 8285)

MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND MANUFACTURER'S INFORMATION

NFPA Rating: Health-2; Flammability-1; Reactivity-0; Special--

HMIS Rating: Health-2; Flammability-1; Reactivity-0; Personal Protection-B

Manufactured For: Hillyard Industries, Inc.
Address: 302 N. 4th Street
Address: St. Joseph, MO 64501

DOT Hazard Classification (post transition**): LIMITED QUANTITY**
DOT Haz Classification(pretransition**): Consumer Commodity ORM-D**
Identity (trade name as used on label)**:**
LEMON FURNITURE POLISH
Part# HIL0105254

Phone:**(816)233-1321 ext. 8285** or http://www.hillyard.com

MSDS Number: A00135 Revision- 14a

Emergency Response Number: Chemtrec 1-800-424-9300
NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA

Date Prepared: 04/12/06 Prepared By: AH/IB
Information Calls: (770)422-2071

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
HYDROTREATED LIGHT PETROLEUM DISTILLATES	64742-47-8	No	5 mg/m3 (mist)	5 mg/m3 (mist)	d
PETROLEUM DISTILLATES	8052-41-3	No	100	100	d
ISOBUTANE / PROPANE BLEND	75-28-5	No	800	800	d
	74-98-6	No	1000	1000	d

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/A

Specific Gravity (H2O=1): Concentrate Only = 0.938

Vapor Pressure: PSIG @ 70°F (Aerosols): Max.50

Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A

Vapor Density (Air = 1): N/E

Evaporation Rate (= 1): N/E

Solubility in Water: Partial

Water Reactive: No

Appearance and Odor: Cream color, lemon fragrance.

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols): extinguishes flame:
NOT CATEGORIZED AS FLAMMABLE.

Auto Ignition Temperature
N/E

Flammability Limits in Air by % in Volume:
% LEL: N/E % UEL: N/E

FLASH POINT AND METHOD USED (non-aerosols): N/A
SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus.

EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide, water fog.

Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture.

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY [X] STABLE [ ] UNSTABLE

HAZARDOUS POLYMERIZATION [ ] WILL [X] WILL NOT OCCUR

Incompatibility (Mat. to avoid): Strong oxidizers.

Conditions to Avoid: Open flame, welding arcs, heat, sparks.

Hazardous Decomposition Products: CO, CO2.

SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: [X] INHALATION [ ] INGESTION [X] SKIN ABSORPTION [ ] EYE [ ] NOT HAZARDOUS

ACUTE EFFECTS:

Inhalation: Excessive inhalation of vapors can be harmful and may cause headache, dizziness, asphyxia, anesthetic effects and possible unconsciousness.

Eye Contact: Slight irritation.

Skin Contact: Slight irritation.

Ingestion: Possible chemical pneumonitis if aspirated into lungs. Nausea.

CHRONIC EFFECTS: (Effects due to excessive exposure to the raw materials of this mixture) Petroleum distillate has caused kidney injury in laboratory animals. Stomach and intestine irritant.

Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions.

EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention.

Skin Contact: Wash with soap and water. If irritated, seek medical attention.

Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.

Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by U.S. Bureau of Mines for organic vapor.

Protective Gloves: Latex, if skin easily irritated.

Eye Protection: Safety glasses recommended.

Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.

Other Protective Clothing & Equipment: None

Hygienic Work Practices: Wash with soap and water before handling food. Remove contaminated clothing.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Absorb with suitable medium. Incinerate or landfill according to local, state or Federal regulations. DO NOT FLUSH LIQUID TO SEWER.

Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.

Precautions To Be Taken In Handling & Storage: Do not puncture or incinerate containers. Do not store at temperatures above 130°F.

Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN. Avoid food contamination. Avoid breathing vapors. Remove ignition sources.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

** Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only

SAFETY DATA SHEET

1. Identification

Product identifier	**LIQUID ENZYME II**
Other means of identification	
SDS number	559N-46A
Product code	HIL00470
Recommended use	Multipurpose Drain Maintenance
Recommended restrictions	None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Manufacturer

Company name	HILLYARD INDUSTRIES
Address	302 North Fourth St. St. Joseph, MO 64501
Contact person	Regulatory Affairs
Telephone number	(816) 233-1321 (Ext. 8285)
Fax	(816) 383-8485
E-mail	regulatoryaffairs@hillyard.com
Emergency telephone #	(800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure, or accident involving chemicals.)

2. Hazard(s) identification

Physical hazards	Not classified.
Health hazards	Not classified.
Environmental hazards	Not classified.
OSHA defined hazards	Not classified.

Label elements

Hazard symbol	None.
Signal word	None.
Hazard statement	The mixture does not meet the criteria for classification.
Precautionary statement	
Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law in compliance with applicable federal, state and local requirements.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

The manufacturer lists no ingredients as hazardous according to OSHA 29 CFR 1910.1200.

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Move container from fire area if it can be done without risk.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Extinguish all flames in the vicinity. This product is miscible in water. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills in original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection	If contact is likely, safety glasses with side shields are recommended.
Skin protection	
Hand protection	Not normally needed.
Other	Not normally needed.
Respiratory protection	Not normally needed.

Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	Opaque, white liquid
Physical state	Liquid.
Form	Liquid.
Color	White
Odor	Floral odor
Odor threshold	Not available
pH	7 - 8
Melting point/freezing point	Not available
Initial boiling point and boiling range	212 °F (100 °C)
Flash point	> 200.0 °F (> 93.3 °C) Tag Closed Cup
Evaporation rate	< 1 (ethyl ether = 1)
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	17.5 mm Hg
Vapor density	0.6 AIR=1
Relative density	0.99 at 77°F
Solubility(ies)	
Solubility (water)	100 complete
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Other information	
Density	8.32 lb/gal
Percent volatile	99 - 100 %
VOC (Weight %)	0 %

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	Product concentrate is not an irritant; prolonged exposure may produce slight irritation in sensitive individuals
Eye contact	Direct contact with eyes may cause temporary irritation.

Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity	Not available.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization	Not available.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Further information	This product has no known adverse effect on human health.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Triple rinse (or equivalent). Then offer clean, dry container for recycling or reconditioning.

14. Transport information

DOT

Not regulated as dangerous goods.

15. Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - No Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical	No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Safe Drinking Water Act (SDWA)	Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed.

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	01-22-2015
Version #	01
HMIS® ratings	Health: 0 Flammability: 0 Physical hazard: 0
Disclaimer	No representations or warranties, either express or implied, of merchantability, fitness for a particular purpose, or of any nature are made with respect to the product(s) or information contained in this material safety data sheet. The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate. The buyer or user assumes all risks associated with the use, misuse or disposal of this product. The buyer or user is responsible to comply with all federal, state or local regulations concerning the use, misuse or disposal of these products.

MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND MANUFACTURER'S INFORMATION

NFPA Rating: Health-1; Flammability-1; Reactivity-0; Special- -

HMIS Rating: Health-1; Flammability-1; Reactivity-0; Personal Protection-B

Manufactured For: Hillyard Industries, Inc.
Address: 302 N. 4th Street
Address: St. Joseph, MO 64501

DOT Hazard Classification (post transition**): LIMITED QUANTITY**
DOT Haz Classification(pretransition**): Consumer Commodity ORM-D**
Identity (trade name as used on label)**:**

Quick & Clean EP Environmental Preference
Stainless Steel Cleaner & Polish
Part #HIL0113454

Phone: **(816)-233-1321 ext. 8285** or http://www.hillyard.com

MSDS Number: A00146 Revision- first issue-a

EMERGENCY RESPONSE NUMBER: Chemtrec 1-800-424-9300
NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA

Date Prepared: 08/25/08 Prepared By: IB
Information Calls: (770)422-2071

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
NEW JERSEY TRADE SECRET REGISTRY NUMBER AMR-A00146	proprietary	No	NE	NE	d

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/A

Specific Gravity (H2O=1): Concentrate Only = 0.95

Vapor Pressure: PSIG @ 70°F (Aerosols): Max. 120

Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A

Vapor Density (Air = 1): N/E

Evaporation Rate (BuAc = 1): Slower

Solubility in Water: Soluble

Water Reactive: No

Appearance and Odor: Foaming spray with lemon odor.

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) **:** NO FLAME PROJECTION: **NOT CATEGORIZED AS FLAMMABLE**

Auto Ignition Temperature N/E

Flammability Limits in Air by % in Volume:
% LEL: N/E % UEL: N/E

FLASH POINT AND METHOD USED (non-aerosols): N/A
SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus.

EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide.

Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture.

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY [X] STABLE [ ] UNSTABLE

HAZARDOUS POLYMERIZATION [ ] WILL [X] WILL NOT OCCUR

Incompatibility (Mat. to avoid):Strong oxidizers.

Conditions to Avoid: Open flame, welding arcs, heat, sparks.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, oxides of nitrogen.

SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: [X] INHALATION [ ] INGESTION [X] SKIN ABSORPTION [X] EYE [ ] NOT HAZARDOUS

ACUTE EFFECTS

Inhalation: Excessive inhalation of vapors can be harmful & may cause headache, dizziness, asphyxia, anesthetic effects & possible unconsciousness.

Eye Contact: May cause slight irritation.

Skin Contact: May cause slight irritation.

Ingestion: Possible chemical pneumonitis if aspirated into lungs.

CHRONIC EFFECTS: None Known.

Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions.

EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention.

Skin Contact: Wash with soap and water. If irritated, seek medical attention.

Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.

Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by NIOSH to be used in a positive pressure mode.

Protective Gloves: Gloves suggested. Nitrile, latex.

Eye Protection: Safety glasses recommended.

Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.

Other Protective Clothing & Equipment: None

Hygienic Work Practices: Wash with soap and water before handling food. Remove contaminated clothing.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Flush to sewer with water.

Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.

Precautions To Be Taken In Handling & Storage: Do not puncture or incinerate containers. Do not store at temperatures above 130°F.

Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN. Avoid food contamination. Avoid breathing vapors.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

** Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only

SAFETY DATA SHEET

Issuing Date 23-Dec-2013 **Revision Date** 23-Dec-2013 **Revision Number** 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

GHS product identifier

Product Name **Hillyard Quick & Clean Stainless Steel Wipes**

Other means of identification

Product Code(s) **HIL01142**

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Stainless Steel Cleaning Wipes

Uses advised against None reasonably foreseeable

Supplier's details

Supplier Address
Hillyard Industries, Inc.
302 North Fourth Street P.O. Box 909
St. Joseph, MO 64502
1-800-233-1321
www.hillyard.com

Emergency telephone number

Emergency Telephone Number 24 Hour Emergency Response 1-800-424-9300

Poison Control Center: 1-800-222-1222

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200)

Aspiration Toxicity	Category 1
Flammable liquids	Category 4

GHS Label elements, including precautionary statements

Emergency Overview

Signal Word **Danger**

Hazard Statements

- May be fatal if swallowed and enters airways
-
- Combustible liquid.

Appearance Colorless **Physical State** Liquid. **Odor** Citrus

Precautionary Statements

Prevention
- Keep away from heat/sparks/open flames/hot surfaces - No smoking
- Wear protective gloves/protective clothing/eye protection/face protection.

General Advice
- None

Ingestion
- IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
- Do NOT induce vomiting.

Fire
- In case of fire: Use CO2, dry chemical, or foam for extinction.

Storage
- Store locked up
- Store in a well-ventilated place. Keep cool.

Disposal
- Dispose of contents/container to an approved waste disposal plant.

Hazard Not Otherwise Classified (HNOC)

Not applicable

Other information
Toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	Trade secret
White mineral oil	8042-47-5	10-30	*
2,6-Di-tert-butyl-p-cresol	128-37-0	< 0.1	*

**The exact percentage (concentration) of composition has been withheld as a trade secret.*

4. FIRST AID MEASURES

Description of necessary first-aid measures

Eye Contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin Contact Wash skin with soap and water.

Inhalation Move to fresh air.

Ingestion Clean mouth with water and afterwards drink plenty of water.

Most important symptoms/effects, acute and delayed

Most Important Symptoms/Effects No information available.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising from the Chemical
No information available.

Explosion Data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Ensure adequate ventilation.

Environmental Precautions

Environmental Precautions See Section 12 for additional Ecological Information

Methods and materials for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible Products None known based on information supplied.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
White mineral oil 8042-47-5	TWA: 5 mg/m^3 inhalable fraction excluding metal working fluids, highly & severely refined	TWA: 5 mg/m^3 (vacated) TWA: 5 mg/m^3	IDLH: 2500 mg/m^3 TWA: 5 mg/m^3 STEL: 10 mg/m^3

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/Face Protection No special protective equipment required.
Skin and Body Protection No special protective equipment required.
Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State Liquid **Appearance** Colorless
Odor Citrus **Odor Threshold** No information available

Property	Values	Remarks/ - Method
pH	No data available	None known
Melting Point/Range	No data available	None known
Boiling Point/Boiling Range	187.78 °C / 370 °F	None known
Flash Point	No data available 71.1 160	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limits in Air		
upper flammability limit	No data available	
lower flammability limit	No data available	
Vapor Pressure	No data available	None known
Vapor Density	> 1 (air = 1)	None known
Relative Density	No data available	None known
Specific Gravity	0.800	None known
Water Solubility	Negligible	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition Temperature	No data available	None known
Decomposition Temperature	No data available	None known
Viscosity	No data available	None known

Flammable Properties Not flammable

Explosive Properties No data available
Oxidizing Properties No data available

Other information

VOC Content (%) 3.00%

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

None known based on information supplied.

Incompatible materials

None known based on information supplied.

Hazardous decomposition products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation May be harmful if inhaled.
Eye Contact Contact with eyes may cause irritation.
Skin Contact May cause irritation.
Ingestion Not an expected route of exposure. Potential for aspiration if swallowed. May be fatal if swallowed and enters airways.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Isoparaffinic Hydrocarbon	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.2 mg/L (Rat) 4 h
White mineral oil	> 5000 mg/kg (Rat)	-	-
Naphtha (petroleum), hydrotreated heavy	> 5000 mg/kg (Rat)	> 3160 mg/kg (Rabbit)	-

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Delayed and immediate effects and also chronic effects from short and long term exposure

Sensitization No information available.
Mutagenic Effects No information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
White mineral oil	A2			
2,6-Di-tert-butyl-p-cresol		Group 3	-	-

ACGIH: (American Conference of Governmental Industrial Hygienists)
A2 - Suspected Human Carcinogen

Reproductive Toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.

Aspiration Hazard No information available.

Numerical measures of toxicity - Product

The following values are calculated based on chapter 3.1 of the GHS document:

LD50 Oral 6611 mg/kg; Acute toxicity estimate

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic life with long lasting effects.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Isoparaffinic Hydrocarbon 64742-47-8		LC50 96 h: = 45 mg/L flow-through (Pimephales promelas) LC50 96 h: = 2.2 mg/L static (Lepomis macrochirus) LC50 96 h: = 2.4 mg/L static (Oncorhynchus mykiss)		LC50 96 h: = 4720 mg/L (Den-dronereides heteropoda)
White mineral oil 8042-47-5		LC50 96 h: > 10000 mg/L (Lepomis macrochirus)		
Naphtha (petroleum), hydrotreated heavy 64742-48-9		LC50 96 h: = 2200 mg/L (Pimephales promelas)		LC50 96 h: = 2.6 mg/L (Chaetogammarus marinus)
2,6-Di-tert-butyl-p-cresol 128-37-0	EC50 72 h: = 6 mg/L (Pseudokirchneriella subcapitata) EC50 72 h: > 0.42 mg/L (Desmodesmus subspicatus)	LC50 48 h: = 5 mg/L (Oryzias latipes)	EC50 = 7.82 mg/L 5 min EC50 = 8.57 mg/L 15 min EC50 = 8.98 mg/L 30 min	

Persistence and Degradability No information available.

Bioaccumulation No information available.

Chemical Name	Log Pow
White mineral oil	6.006
2,6-Di-tert-butyl-p-cresol	4.17

Other Adverse Effects

No information available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods Dispose of in accordance with federal, state, and local regulations

Contaminated Packaging Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA Complies

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

"X" designates that the ingredients are listed on the state right to know list.

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
White mineral oil	X	X	X		X
2,6-Di-tert-butyl-p-cresol	X	X	X		X

U.S. EPA Label Information
EPA Pesticide Registration Number Not applicable

16. OTHER INFORMATION

NFPA	**Health Hazard**	1	**Flammability**	2	**Instability**	0	**Physical and Chemical Hazards**	-
HMIS	**Health Hazard**	1	**Flammability**	2	**Physical Hazard**	0	**Personal Protection**	X

Prepared By Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501
Issuing Date 23-Dec-2013
Revision Date 23-Dec-2013
Revision Note Initial Release.

General Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet

MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 1 Flammability = 1 Reactivity = 0
HMIS RATING: Health = 1 Flammability = 1 Reactivity = 0

SECTION I – IDENTITY AND MANUFACTURER'S INFORMATION (445N-60A)

Manufacturer's Name: HILLYARD INDUSTRIES
Address: 302 North Fourth Street
St. Joseph, MO 64501

Product Name: **QUICK & CLEAN SUPER HIL-TONE**
Date Prepared: September 15, 2004
Prepared by: Regulatory Affairs Department

Emergency Telephone No.: (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)

Other information calls: (816) 233-1321 (Ext. 8285)
http://www.hillyard.com

SECTION II – INGREDIENTS/IDENTITY INFORMATION

Components

(Specific Chemical Identity: Common Name(s)	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Petroleum distillate (solvent-refined heavy and light paraffinic)	64741-88-4 & 64741-89-5	5 mg/M^3	5 mg/M^3	10 mg/M^3	94-99
Aliphatic hydrocarbon petroleum naphtha	64742-88-7	100 ppm*	100 ppm*	not applicable	less than 5%

VOC = Less than 7%.
*Not established for this CAS #; use Stoddard Solvent (CAS #8052-41-3) for PEL & TLV.

SECTION III – PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 305°F
Vapor Pressure (mm Hg.): 6.6
Vapor Density (AIR = 1): 4.7
Solubility in Water : negligible
Auto-Ignition: 243°C

Specific Gravity (H_2O = 1): 25ºC = 0.86 & 39°C= 0.85
Percent Volatile by Volume (%): 6
Evaporation Rate (ethyl ether = 1): slower than 1
Appearance and Odor: slightly yellow – clear to translucent liquid; pleasant odor

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

Flash point: 225°F (Pensky-Marten Closed Cup)
Flammable Limits: LEL = not established UEL = not established
Extinguishing Media: Use water spray, regular foam, CO_2 or carbon dioxide fire fighting apparatus.
Special Fire Fighting Procedures: The use of self-contained breathing apparatus is recommended for fire fighters. Wear structural firefighters protective clothing.
Unusual Fire and Explosion Hazards: Can be made to burn (flash point 225°F). Incomplete combustion can yield carbon monoxide and various hydrocarbons.

SECTION V – PHYSICAL HAZARDS

Stability: Stable
Conditions to Avoid: None known
Incompatibility (Materials to Avoid): This product is not compatible with strong oxidizing agents, strong acids or bases and selected amines.
Hazardous Decomposition Products or Byproducts: Thermal decomposition in air produces carbon monoxide and carbon dioxide.
Hazardous Polymerization: Will not occur
Conditions to Avoid: None known

SECTION VI – HEALTH HAZARD DATA

Routes of entry: Inhalation? Yes Skin? Yes Ingestion? Yes

HEALTH HAZARDS (1. Acute and 2. Chronic)

1. When tested according to Federal Hazardous Substance Act product was not a primary skin irritant but produced moderate skin irritation on prolonged exposure and the concentrate was not an eye irritant. Also test on the concentrate showed that acute oral LD50 was not acutely toxic at 5.0 g./kg. Inhalation testing showed that the LC50 nominal concentration to be 13.2 mg./l. (actual concentration 3.8 mg./l. Prolonged overexposure by inhalation may cause headache, dizziness, nausea, unconsciousness.
2. None known by manufacturer.

Chemical listed as Carcinogen or Potential Carcinogen:
National Toxicology Program = No **I.A.R.C. Monographs =** No **OSHA =** No
This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater than or equal to 0.1%.

SECTION VI – HEALTH HAZARD DATA cont.

Signs and Symptoms of Exposure: Ingestion may irritate stomach and intestines. May be aspirated into lungs if swallowed, resulting in pulmonary edema and chemical pneumonitis.

Medical Conditions Generally Aggravated by Exposure: Pre-existing eye, skin and respiratory disorders. Isoparaffinic hydrocarbons have caused kidney injury in male rats only. No comparable health hazard for kidney disease is known to occur in humans.

Emergency and First Aid Procedures: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately. In case of eye contact immediately flush with plenty of water for at least 15 minutes; for skin, wash thoroughly with soap and water. If irritation persist get medical attention. Wash clothing before reuse. If swallowed, do not induce vomiting. Call a physician.

SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled:
Remove all sources of ignition. Avoid breathing vapors or spray mist. Ventilate area and remove with inert absorbent Do not pick up solution with automatic scrubber or wet pick-up vacuum

Waste Disposal Method: Dispose of in accordance with state or local regulations. Do not incinerate closed container. Do not dispose of in storm drains or waterways.

Precautions To Be Taken In Handling And Storing: Since empty packages retain product residue, follow label warnings even after package is empty. Keep container closed when not in use

Other Precautions: Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. USE ONLY WITH ADEQUATE VENTILATION. Do not breathe vapors or spray mist. **Ensure fresh air entry during application and drying.** If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor / mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during and after application. Follow respirator manufacturer's directions for respirator use. Do not spray fine fog mist into sparks or open flame - vapors may ignite. Close container after each use. Avoid prolonged contact with eyes, skin and clothing. Wash thoroughly after handling. Do not take internally. This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR Part 372.

SECTION VIII – CONTROL MEASURES

Respiratory Protection (Specify Type): Usually not needed unless product is misted or heated. Wear appropriate, properly fitted respirator NIOSH or MSHA approved) unless air monitoring demonstrates vapor or mist levels are above applicable limits.

Ventilation: At least 10 air changes/hour recommended

Local Exhaust = Recommended **Mechanical (General) =** Recommended **Special =** N/A **Other =** N/A

Protective Gloves: Not necessary with normal use. If prolonged contact is unavoidable, wear polyvinyl chloride (PVC); neoprene; nitrile; polyvinyl alcohol; viton.

Eye Protection: Not necessary with normal use.

Other Protective Clothing or Equipment: Normal use - Protective clothing such as uniforms, coveralls. If prolonged contact is unavoidable, wear protective clothing made of the polyvinyl alcohol (PVA); polyvinyl chloride (PVC); neoprene; nitrile; viton; polyurethane.

Work / Hygienic Practices: Wash contaminated clothing before reuse.

SECTION IX – TRANSPORTATION INFORMATION

Applicable regulations: CFR = no **IMCO =** no **IATA =** no**.**

Proper shipping name for highway: Petroleum Oil

UN No.: not applicable **Limited Qty.:** not applicable **Hazard class:** not applicable

Labels required: not required **DOT Exception:** not applicable

EPA Hazardous waste characteristics: Ignitability = not applicable; **Corrosivity =** not applicable;
Reactivity = not applicable.

DISCLAIMER OF WARRANTIES

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.

The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate.

THE BUYER OR USER ASSUMES ALL RISKS ASSOCIATED WITH THE USE, MISUSE OR DISPOSAL OF THIS PRODUCT. THE BUYER OR USER IS RESPONSIBLE TO COMPLY WITH ALL FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING THE USE, MISUSE OR DISPOSAL OF THESE PRODUCTS.

Material Safety Data Sheet: QUICK HOLD, M/M

Supercedes Date 06/02/2003 **Issuing Date** 02/27/2009

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name QUICK HOLD, M/M
Product Code 4969
Information on Manufacturer
CERTIFIED LABS, DIV. OF NCH CORP.
BOX 152170
IRVING, TEXAS 75015

Recommended Use Adhesive catalyst
Chemical Nature Mixture
Emergency Telephone Number
CHEMTREC ? 800-424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview
Danger
Extremely flammable
May be harmful if inhaled
Causes skin irritation
Severe eye irritation
May be harmful if swallowed

Color Colorless - Light yellow **Physical State** Liquid **Odor** Acetone

Potential Health Effects
Principle Route of Exposure Inhalation, Skin contact, Eye contact.
Primary Routes of Entry Inhalation, Skin Absorption.
Acute Effects
Eyes Severe irritation.
Skin Causes skin irritation. May be absorbed through the skin in harmful amounts.
Inhalation Inhalation may cause central nervous system effects. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.
Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.
Chronic Effects Liver and kidney injuries may occur. Prolonged skin contact may defat the skin and produce dermatitis.
Target Organ Effects Central nervous system, Liver, Kidney, Skin, Eyes, Respiratory system.
Aggravated Medical Conditions Neurological disorders. Liver disorders. Kidney disorders. Skin disorders. Respiratory disorders.
Potential Environmental Effects See Section 12 for additional Ecological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No
Acetone	67-64-1
Benzenamine, N,N,4-trimethyl-	99-97-8

4. FIRST AID MEASURES

General Advice Avoid contact with skin, eyes, and clothing. Avoid breathing vapors, mist, or gas.
Eye Contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately.
Skin Contact Wash off immediately with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention if irritation develops and persists. Wash contaminated clothing before re-use.
Inhalation If inhaled, remove to fresh air. Get medical attention if symptoms occur.
Ingestion Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention if symptoms occur.
Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point -4?F / -20?C **Method** Tag closed cup
Autoignition Temperature No information available.
Flammability Limits in Air % Mixture. **Upper** 12.8 **Lower** 2.6
Suitable Extinguishing Media
Water spray. Carbon dioxide (CO2). Foam. Dry chemical.
Specific Hazards Arising from the Chemical
Extremely flammable. Solvent vapors are heavier than air and may spread along floors. Vapors may ignite and explode. Material can create slippery conditions.
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA	**Health**	2	**Flammability**	4	**Instability**	0
HMIS	**Health**	2	**Flammability**	4	**Instability**	0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Remove all sources of ignition. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
Environmental Precautions Do not flush into surface water or sanitary sewer system.
Methods for Containment Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth,

vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

Methods for Cleaning Up Pick up and transfer to properly labeled containers.

Neutralizing Agent Not applicable.

7. HANDLING AND STORAGE

Handling Avoid contact with skin, eyes, and clothing. Avoid breathing vapors, mist or gas. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges.

Storage Keep away from open flames, hot surfaces and sources of ignition. Keep container tightly closed in a dry and well-ventilated place.

Storage Temperature **Minimum** 35?F / 2?C **Maximum** 120?F / 49?C

Storage Conditions **Indoor** X **Outdoor** **Heated** **Refrigerated**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Acetone	TWA: 500 ppm STEL: 750 ppm	TWA: 1000 ppm TWA: 2400 mg/m^3	IDLH: 2500 ppm TWA: 250 ppm TWA: 590 mg/m^3
Benzenamine, N,N,4-trimethyl-	No data available	no data available	no data available

Engineering Measures Use with local exhaust ventilation. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/Face Protection Tightly fitting safety goggles.

Skin Protection Wear suitable protective clothing, Impervious gloves.

Respiratory Protection Use NIOSH approved respiratory protection.

General Hygiene Considerations Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	**Viscosity**	Non viscous
Color	Colorless - Light yellow	**Odor**	Acetone
Appearance	Transparent	**pH**	Not applicable
Specific Gravity	0.8	**Evaporation Rate**	5 (Butyl acetate=1)
Percent Volatile (Volume)	100	**VOC Content (%)**	<20
VOC Content (g/l)	<160	**Vapor Pressure**	184 mmHg @ 70 ?F
Vapor Density	2 (Air = 1.0)	**Solubility**	Appreciable
Boiling Point/Range	133?F / 56?C		

10. STABILITY AND REACTIVITY

Chemical Stability Stable. Hazardous polymerization does not occur.

Conditions to Avoid Keep away from open flames, hot surfaces, and sources of ignition.

Incompatible Products Strong oxidizing agents. Nitric acid.

Hazardous Decomposition Products Carbon oxides, Nitrogen oxides (NOx).

Possibility of Hazardous Reactions None under normal processing.

11. TOXICOLOGICAL INFORMATION

Product Information No information available.

Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Acetone	5800 mg/kg (Rat)	no data available	no data available	no data available	no data available
Benzenamine, N,N,4-trimethyl-	1650 mg/kg (Rat)	no data available	1400 mg/m^3 (Rat) 4 h	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Acetone	no data available	no data available	no data available	no data available	respiratory system, skin, eyes, CNS
Benzenamine, N,N,4-trimethyl-	no data available	no data available	no data available	no data available	no data available

Carcinogenicity .

Component	ACGIH	IARC	NTP	OSHA	Other
Acetone	not applicable	not applicable	not applicable	not applicable	not applicable
Benzenamine, N,N,4-trimethyl-	not applicable	not applicable	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information No information available.

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Acetone	no data available	LC50= 5540 mg/L Oncorhynchus mykiss 96 h LC50= 6210 mg/L Pimephales promelas 96 h LC50= 8300 mg/L Lepomis macrochirus 96 h	EC50 = 14500 mg/L 15 min	EC50 = 0.0039 mg/L 48 h EC50 = 12600 mg/L 48 h EC50 = 12700 mg/L 48 h	-0.24
Benzenamine, N,N,4-trimethyl-	no data available	LC50= 46.0 mg/L Pimephales promelas 96 h	no data available	no data available	N/A

Persistence and Degradability No information available.
Bioaccumulation No information available.
Mobility No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal Dispose of in accordance with local regulations.
Container Disposal Empty containers should be taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION

DOT DOT
- **Proper Shipping Name** Consumer commodity
- **Hazard Class** ORM-D
- **Description** Consumer commodity ,ORM-D

TDG
- **Proper shipping name** Acetone, Ltd Qty
- **Hazard Class** 3
- **UN-No** UN1090
- **Packing Group** II
- **Description** ACETONE,3,UN1090,PG II, Ltd Qty

ICAO
- **Proper Shipping Name** DO NOT SHIP AIR

IATA
- **Shipping Description** DO NOT SHIP AIR

IMDG/IMO
- **Proper Shipping Name** Acetone (Acetone solutions), Ltd Qty
- **Hazard Class** 3
- **UN-No** UN1090
- **Packing Group** II
- **EmS No.** F-E, S-D
- **Shipping Description** UN1090, Acetone (Acetone solutions),3,PG II, Ltd Qty

15. REGULATORY INFORMATION

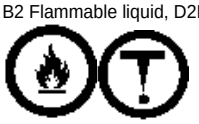
Inventories
TSCA Complies
DSL Complies
U.S. Federal Regulations
SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372.
SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	Yes	No	No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Acetone	5000 lb	Not applicable
Benzenamine, N,N,4-trimethyl-	Not applicable	Not applicable

Canada
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.
WHMIS Hazard Class
B2 Flammable liquid, D2B Toxic materials.



16. OTHER INFORMATION

Prepared By	Kristen Stansbury
Supercedes Date	06/02/2003
Issuing Date	02/27/2009
Reason for Revision	No information available.
Glossary	No information available.
List of References.	TBD

CERTIFIED LABS, DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage or disposal of the product. The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

QUIKRETE®
CEMENT & CONCRETE PRODUCTS™

CONCRETE BONDING ADHESIVE

MATERIAL SAFETY DATA SHEET
(Complies with OSHA 29 CFR 1910.1200)

SECTION I: PRODUCT IDENTIFICATION

The QUIKRETE® Companies
One Securities Centre
3490 Piedmont Road, Suite 1300
Atlanta, GA 30329

Emergency Telephone Number
(770) 216-9580

Information Telephone Number
(770) 216-9580

MSDS A1
Revision: Aug-11

QUIKRETE® Product Name	**Code #**
CONCRETE BONDING ADHESIVE	9902

Product Use: Liquid bonding agent for bonding new concrete to old concrete

SECTION II - HAZARD IDENTIFICATION

Route(s) of Entry: Inhalation, Ingestion
Acute Exposure: None known
Chronic Exposure: Repeated or prolonged skin contact may result in mild irritation. Vapor may be an irritant to the respiratory tract. Ingestion may cause irritation to the gastrointestinal tract.
Carcinogenicity: Not applicable
Signs and Symptoms of Exposure: None known
Medical Conditions Generally Aggravated by Exposure: None known
Chronic Exposure: None known

SECTION III - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components	CAS No.	PEL (OSHA) Mg/m^3	TLV (ACGIH) mg/m^3
Vinyl Acetate Ethylene Co-polymer	Not Hazardous		
Vinyl Alcohol Polymer	Not Hazardous		

SECTION IV – First Aid Measures

Eyes: Immediately flush eye thoroughly with water. Continue flushing eye for at least 15 minutes, including under lids. Call physician immediately.

Skin: Wash skin with cool water and pH-neutral soap or a mild detergent. Seek medical treatment if irritation or inflammation develops or persists.

Inhalation: Remove person to fresh air. Seek medical help if irritation persists.

Ingestion: Treat symptomatically and supportively. Get medical attention. DO NO attempt to give anything by mouth to an unconscious person.

SECTION V - FIRE AND EXPLOSION HAZARD DATA

Flammability: Noncombustible and not explosive.
Auto-ignition Temperature: Not Applicable
Flash Point: > 212°F
Extinguishing Media: Water Fog; Foam; CO_2; Dry Chemical
Special Firefighting Procedures: Fire fighters should be equipped with self-contained breathing apparatus to protect against potentially toxic and irritating fumes.
Fire & Explosion Hazards: This is a water-based product and presents no particular fire or explosion hazard. Dry polymer film will burn. Product contains low level of organic volatiles which may be emitted at elevated temperatures.
Hazardous Combustion Products: Carbon Monoxide, Carbon Dioxide, unknown hydrocarbons.
Lower Explosion Limit (%): Not Applicable
Upper Explosion Limit (%): Not Applicable

SECTION VI – ACCIDENTAL RELEASE MEASURES

Absorb spillages onto sand, earth or any suitable absorbent material. Sweep up and shovel into waste drums. Wash the spillage area with water. Washings must be prevented from entering surface water drains. Disposal should be in accordance with local, state or national legislation.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND STORAGE

Storage Temperature: 40 – 100°F
Handling/Storage: Avoid extreme temperatures. Protect from freezing. This material should not be spilled, discharged, or flushed into sewers or public waterways. Product contains low level of organic volatiles which could accumulate in the un-vented headspace of drums or bulk storage vessels. Open drums in well-ventilated area, avoid breathing vapors.

SECTION VIII – EXPOSURE CONTROL MEASURES

Engineering Controls: General.
Personal Protection: Wear safety glasses with side shields. Protect against splashing. The use of chemically resistant gloves is recommended. Clothing protection should be worn. Rubber boots and apron should be worn if exposure is severe. Remove contaminated clothing and launder before reuse.
Exposure Limits: Consult local authorities for acceptable exposure limits.

SECTION IX - PHYSICAL/CHEMICAL CHARACTERISTICS

Appearance: Milky white liquid
Melting Point: 32°F (0°C)
Vapor Pressure: 17 mm Hg @ 68°F (20°C)
Odor: vinyl acetate odor
Specific Gravity: 1.0 to 1.2
Boiling Point: >212°F (100°C)
Vapor Density: <1(water)
VOC: 1.1 g/L
Evaporation Rate: <1(water)
Solubility in Water: Water miscible. Dilution with water generally will lower dispersion stability.

SECTION X - REACTIVITY DATA

Stability: Stable.
Incompatibility (Materials to Avoid): Strong oxidizers, materials that react with water
Hazardous Decomposition or By-products: None
Hazardous Polymerization: Will Not Occur.
Condition to Avoid: Protect from temperatures below 40°F to preserve product utility.

SECTION XI – TOXICOLOGICAL INFORMATION

Routes of Entry: Inhalation, Ingestion
Toxicity to Animals:
LD50: Not Available
LC50: Not Available
Chronic Effects on Humans: Not established
Special Remarks on Toxicity: Unlikely to cause harmful effects under recommended conditions of handling and use

SECTION XII – ECOLOGICAL INFORMATION

Ecotoxicity: Not Available
BOD5 and COD: Not Available
Products of Biodegradation: Not available
Toxicity of the Products of Biodegradation: Not available
Special Remarks on the Products of Biodegradation: Ingress to waterways may cause persistent milky turbidity.

SECTION XIII – DISPOSAL CONSIDERATIONS

Waste Disposal Method: Disposal should be in accordance with local, state or national legislation. This product is not classified as a hazardous waste under the authority of the RCRA (40CFR 261) or CERCLA (40CFR 117&302).

SECTION XIV – TRANSPORT INFORMATION

DOT/UN Shipping Name: Non-regulated
DOT Hazard Class: Non-regulated
Shipping Name: Non-regulated
Non-Hazardous under U.S. DOT and TDG Regulations

SECTION XV – OTHER REGULATORY INFORMATION

SARA (Title III) Section 313: Not subject to reporting requirements

TSCA (May 1997): All components are on the TSCA inventory list

Federal Hazardous Substances Act: Is a hazardous substance subject to statues promulgated under the subject act

Canadian Environmental Protection Act: Not listed

Canadian WHMIS: Considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations and subject to the requirements of WHMIS. This product has been classified according to the hazard criteria of the Controlled Products Regulation (CPR). This document complies with the WHMIS requirements of the Hazardous Products Act (HPA) and the CPR.

SECTION XVI – OTHER INFORMATION

HMIS-III:

Health –
- 0 = No significant health risk
- 1 = Irritation or minor reversible injury possible
- 2 = Temporary or minor injury possible
- 3 = Major injury possible unless prompt action is taken
- 4 = Life threatening, major or permanent damage possible

Flammability-
- 0 = Material will not burn
- 1 = Material must be preheated before ignition will occur
- 2 = Material must be exposed to high temperatures before ignition
- 3 = Material capable of ignition under normal temperatures
- 4 = Flammable gases or very volatile liquids; may ignite spontaneously

Physical Hazard-
- 0 = Material is normally stable, even under fire conditions
- 1 = Material normally stable but may become unstable at high temps
- 2 = Materials that are unstable and may undergo react at room temp
- 3 = Materials that may form explosive mixtures with water
- 4 = Materials that are readily capable of explosive water reaction

Abbreviations:

ACGIH	American Conference of Government Industrial Hygienists
CAS	Chemical Abstract Service
CERCLA	Comprehensive Environmental Response, Compensation & Liability Act
CFR	Code of Federal Regulations
CPR	Controlled Products Regulations (Canada)
DOT	Department of Transportation
IARC	International Agency for Research
MSHA	Mine Safety and Health Administration
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicity Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TWA	Time-weighted Average
WHMIS	Workplace Hazardous Material Information System

Revision #10-01, supersedes all previous revisions.
Created: November 15, 2006
Last Updated: August 23, 2011

NOTE: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products.

QUIKRETE®
CEMENT & CONCRETE PRODUCTS™

ACRYLIC CRACK FILLERS

MATERIAL SAFETY DATA SHEET
(Complies with OSHA 29 CFR 1910.1200)

SECTION I: PRODUCT IDENTIFICATION

The QUIKRETE® Companies
One Securities Centre
3490 Piedmont Road, Suite 1300
Atlanta, GA 30329

Emergency Telephone Number
(770) 216-9580

Information Telephone Number
(770) 216-9580

MSDS W3
Revision: Feb-10

QUIKRETE® Product Name	Product #
BLACKTOP REPAIR	8630-10
MORTAR REPAIR	8620-09
CONCRETE REPAIR	8620-10

PRODUCT USE: COSMETIC CRACK FILLER FOR CONCRETE OR ASPHALT

SECTION II - HAZARD IDENTIFICATION

Route(s) of Entry: Inhalation, ingestion, skin
Acute Exposure: Inhalation of vapor or mist can cause the following: headache, nausea, irritation of nose, throat and lungs. Direct contact with eyes can cause irritation and possible corneal injury.
Chronic Exposure: None known
Carcinogenicity: Not carcinogenic
Carcinogenicity Listings: Not applicable
Medical Conditions Generally Aggravated by Exposure: None known

SECTION III - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components	CAS No.	PEL (OSHA) mg/M^3	TLV (ACGIH) mg/M^3
Limestone/Marble	1317-65-3	5	5
Acrylic Polymer	Not Hazardous	None	None
May contain:			
Titanium Dioxide	13463-67-7	15	10

SECTION IV – First Aid Measures

Eyes: Immediately flush eye thoroughly with water – do not rub eyes. Continue flushing eye for at least 15 minutes, including under lids, to remove all particles. Call physician immediately.
Skin: Wash skin with cool water and pH-neutral soap or a mild detergent. Seek medical treatment if irritation or inflammation develops or persists.
Inhalation: Remove person to fresh air. If coughing and other symptoms develop, seek medical attention.
Ingestion: If swallowed, give two glasses of water; If large amounts are ingested, induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION V - FIRE AND EXPLOSION HAZARD DATA

Flammability: Noncombustible and not explosive.
Auto-ignition Temperature: Not Applicable
Flash Points: Product may contain less than 1% of a solvent with a Flash Point of 120°C (248°F)
Unusual Hazards: This water-based dispersion can splatter at temperatures above 100°C (212°F). Polymer film can burn once the water has evaporated.

SECTION VI – ACCIDENTAL RELEASE MEASURES

Contain spills immediately with inert materials (eg. Sand, earth). Scrape up and allow to harden before disposal. Use detergent and water to remove the remaining residue.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND STORAGE

Keep from freezing; material may coagulate. The minimum recommended storage temperature for this material is 1°C (34°F). The maximum recommended storage temperature for this material is 38°C (100°F).

SECTION VIII – EXPOSURE CONTROL MEASURES

Engineering Controls: Not applicable

Personal Protection: The use of neoprene gloves is recommended.

Exposure Limits: Consult local authorities for acceptable exposure limits

SECTION IX - PHYSICAL/CHEMICAL CHARACTERISTICS

Appearance: White or tinted viscous liquid.
Boiling Point: ~100°C (212°F)

Specific Gravity: 1.60 – 1.75
Solubility in Water: Dilutable
Odor: slight ether and ammonia odor

SECTION X - REACTIVITY DATA

Stability: This material is considered stable. Avoid temperatures above 177°C (350°F), the onset of polymeric decomposition. Thermal decomposition is dependent on time and temperature.
Incompatibility (Materials to Avoid): Avoid contact with strong oxidizing agents or strong alkalis.
Hazardous Decomposition or By-products: Thermal decomposition may yield acrylic monomers
Hazardous Polymerization: Will Not Occur.
Condition to Avoid: Maintain storage temperature between 1°C (34°F) and 38°C (100°F) to retain product utility.

SECTION XI – TOXICOLOGICAL INFORMATION

Routes of Entry: Inhalation, Ingestion
Toxicity to Animals:
LD50: Not Available
LC50: Not Available
Chronic Effects on Humans: Not Available
Special Remarks on Toxicity: Not Available

SECTION XII – ECOLOGICAL INFORMATION

Ecotoxicity: Not Available
BOD5 and COD: Not Available
Products of Biodegradation: Not available
Toxicity of the Products of Biodegradation: Not available
Special Remarks on the Products of Biodegradation: Not available

SECTION XIII – DISPOSAL CONSIDERATIONS

Waste Disposal Method: The packaging and material may be land filled once hardened. This product is not classified as a hazardous waste under the authority of the RCRA (40CFR 261) or CERCLA (40CFR 117&302).

SECTION XIV – TRANSPORT INFORMATION

DOT/UN Shipping Name: Non-regulated
DOT Hazard Class: Non-regulated
Shipping Name: Non-regulated
Non-Hazardous under U.S. DOT and TDG Regulations

SECTION XV – OTHER REGULATORY INFORMATION

US OSHA 29CFR 1910.1200: Considered hazardous under this regulation and should be included in the employers hazard communication program
SARA (Title III) Sections 311 & 312: Qualifies as a hazardous substance with delayed health effects
SARA (Title III) Section 313: Not subject to reporting requirements
TSCA (May 1997): All components are on the TSCA inventory list
Federal Hazardous Substances Act: Is a hazardous substance subject to statues promulgated under the subject act
Canadian Environmental Protection Act: Not listed
Canadian WHMIS: Considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations and subject to the requirements of Health Canada's Workplace Hazardous Material Information (WHMIS). This product has been classified according to the hazard criteria of the Controlled Products Regulation (CPR). This document complies with the WHMIS requirements of the Hazardous Products Act (HPA) and the CPR.

SECTION XVI – OTHER INFORMATION

HMIS-III:

Health –
0 = No significant health risk
1 = Irritation or minor reversible injury possible
2 = Temporary or minor injury possible
3 = Major injury possible unless prompt action is taken
4 = Life threatening, major or permanent damage possible

Flammability-
0 = Material will not burn
1 = Material must be preheated before ignition will occur
2 = Material must be exposed to high temperatures before ignition
3 = Material capable of ignition under normal temperatures
4 = Flammable gases or very volatile liquids; may ignite spontaneously

Physical Hazard-
0 = Material is normally stable, even under fire conditions
1 = Material normally stable but may become unstable at high temps
2 = Materials that are unstable and may undergo react at room temp
3 = Materials that may form explosive mixtures with water
4 = Materials that are readily capable of explosive water reaction

Abbreviations:

ACGIH	American Conference of Government Industrial Hygienists
CAS	Chemical Abstract Service
CERCLA	Comprehensive Environmental Response, Compensation & Liability Act
CFR	Code of Federal Regulations
CPR	Controlled Products Regulations (Canada)
DOT	Department of Transportation
IARC	International Agency for Research
MSHA	Mine Safety and Health Administration
NIOSH	National Institute for Occupational Safety and Health

NTP	National Toxicity Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TWA	Time-weighted Average
WHMIS	Workplace Hazardous Material Information System

Revision #07-02, supersedes all previous revisions.
Created: 10/25/2006
Last Updated: February 23, 2010

NOTE: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products.

Material Safety Data Sheet
[OSHA 29 CFR 1910.1200]

The QUIKRETE® Companies
One Securities Centre
3490 Piedmont Road, Suite 1300
Atlanta, GA 30329

Emergency Telephone Number
(770) 216-9580

Information Telephone Number
(770) 216-9580

Revision: October 2003

MSDS D

SECTION I: PRODUCT IDENTIFICATION

PRODUCT TYPES: QUIKRETE® DRY PACKAGED PORTLAND CEMENT BASED PRODUCTS (SERIES 2)

QUIKRETE® Product Name	Code #	QUIKRETE® Product Name	Code #
SHOTCRETE (FORMERLY GUN-ITE)	1228	SHOTCRETE MS (FORMERLY GUN-ITE MS)	1229
NON-SHRINK PRECISION GROUT	1585	NON-SHRINK GENERAL PURPOSE GROUT	1585-01
ANCHORING CEMENT	1245	QUIKWALL® FOUNDATION COATING	1215
RAPID HARDENING SAND MIX	1243-50	RAPID ROAD REPAIR, FIBERED	1242-50
HYDRAULIC WATER STOP	1126	RAPID ROAD REPAIR, UNFIBERED	1242-52
QUICK SETTING CEMENT	1240	CONCRETE RESURFACER	1131-60
CONCRETE RESURFACER, SKID RESISTANT	1131-61	EXTERIOR USE ANCHORING CEMENT	1245-80
FIBERCRETE	1009-00	GEOTHERMAL WELL GROUT	1590-55
SELF LEVELING FLOOR RESURFACER			1249-50
FAST-SETTING SELF LEVELING FLOOR RESURFACER (FORMERLY KNOWN AS SELF LEVELING FLOOR RESURFACER: NORMAL SET, FAST SET)			1249-51

(ALSO APPLIES TO CUSTOM BLENDED SHOTCRETE MIXES)

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components	CAS No.	PEL (OSHA) mg/M^3	TLV (ACGIH) mg/M^3
Silica Sand, crystalline	14808-60-7	$\frac{10}{\%SiO_2+2}$	0.05 (respirable)
Portland Cement	65997-15-1	5	5
May Contain one or more of the following ingredients:			
Amorphous Silica	07631-86-9	$\frac{80\ mg/M^3}{\%\ SiO_2}$	10
Calcium Sulfate	10101-41-4 or 13397-24-5	5	5
Lime	01305-62-0	5	5
Fly Ash	68131-74-8	5	5
Calcium Aluminate Cement	65997-16-2	5	5
Clay	01332-58-7	5	5
Pulverized Limestone	01317-65-3	5	5

Other Limits: National Institute for Occupational Safety and Health (NIOSH). Recommended standard maximum permissible concentration=0.05 mg/M^3 (respirable free silica) as determined by a full-shift sample up to 10-hour working day, 40-hour work week. See NIOSH Criteria for a Recommended Standard Occupational Exposure to Crystalline Silica.

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Appearance: Gray to gray-brown colored powder. Some products contain coarse aggregate.

Specific Gravity:	2.6 to 3.15	**Melting Point:**	>2700^{0}F	**Boiling Point:**	>2700^{0}F
Vapor Pressure:	None	**Vapor Density:**	None	**Evaporation Rate:**	None
Solubility in Water:	Slight	**Odor:**	None		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flammability: Noncombustible and not explosive.

SECTION V - REACTIVITY DATA

Stability: Stable.

Incompatibility (Materials to Avoid): Contact of silica with powerful oxidizing agents such as fluorine, chlorine trifluoride, manganese trioxide, oxygen difluoride, may cause fires.

Hazardous Decomposition or By-products: Silica will dissolve in Hydrofluoric Acid and produce a corrosive gas - silicon tetrafluoride.

Hazardous Polymerization: Will Not Occur.

Condition to Avoid: Keep dry until used to preserve product utility.

SECTION VI - HEALTH HAZARD DATA

Route(s) of Entry: Inhalation, Skin, Ingestion

Acute Exposure: Product becomes alkaline when exposed to moisture. Exposure can dry the skin, cause alkali burns and effect the mucous membranes. Dust can irritate the eyes and upper respiratory system. Toxic effects noted in animals include, for acute exposures, alveolar damage with pulmonary edema.

Chronic Exposure: Dust can cause inflammation of the lining tissue of the interior of the nose and inflammation of the cornea. Hypersensitive individuals may develop an allergic dermatitis. Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs and possibly cancer. There is evidence that exposure to respirable silica or the disease silicosis is associated with an increased incidence of Scleroderma, tuberculosis and kidney disorders.

Carcinogenicity Listings:	NTP:	Known carcinogen
	OSHA:	Not listed as a carcinogen
	IARC Monographs:	Group 1 Carcinogen
	California Proposition 65:	Known carcinogen

NTP: The National Toxicology Program, in its "Ninth Report on Carcinogens" (released May 15, 2000) concluded that "Respirable crystalline silica (RCS), primarily quartz dusts occurring in industrial and occupational settings, is *known to be a human carcinogen*, based on sufficient evidence of carcinogenicity from studies in humans indicating a causal relationship between exposure to RCS and increased lung cancer rates in workers exposed to crystalline silica dust (reviewed in IAC, 1997; Brown *et al*., 1997; Hind *et al*., 1997)

IARC: The International Agency for Research on Cancer ("IARC") concluded that there was "*sufficient evidence* in humans for the carcinogenicity of crystalline silica in the forms of quartz or cristobalite from occupational sources", and that there is "*sufficient evidence* in experimental animals for the carcinogenicity of quartz or cristobalite." The overall IARC evaluation was that "crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is *carcinogenic to humans (*Group 1)." The IARC evaluation noted that "carcinogenicity was not detected in all industrial circumstances or studies. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." For further information on the IARC evaluation, see IARC Monographs on the Evaluation of carcinogenic Risks to Humans, Volume 68, "Silica, Some Silicates..." (1997)

Signs and Symptoms of Exposure: Symptoms of excessive exposure to the dust include shortness of breath and reduced pulmonary function. Excessive exposure to skin and eyes especially when mixed with water can cause caustic burns as severe as third degree.
Medical Conditions Generally Aggravated by Exposure: Individuals with sensitive skin and with pulmonary and/or respiratory disease, including, but not limited to, asthma and bronchitis, or subject to eye irritation, should be precluded from exposure. Exposure to crystalline silica or the disease silicosis is associated with increased incidence of scleroderma, Tuberculosis and possibly increased incidence of kidney lesions.
Emergency First Aid Procedures:
Eyes: Immediately flush eye thoroughly with water. Continue flushing eye for at least 15 minutes, including under lids, to remove all particles. Call physician immediately.
Skin: Wash skin with cool water and pH-neutral soap or a mild detergent. Seek medical treatment if irritation or inflammation develops or persists. Seek immediate medical treatment in the event of burns.
Inhalation: Remove person to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. Seek medical help if coughing and other symptoms do not subside. Inhalation of large amounts of portland cement require immediate medical attention.
Ingestion: Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Spills: If spilled, use dustless methods (vacuum) and place into covered container for disposal or use if not contaminated or wet. Use adequate ventilation.
Waste Disposal Method: The packaging and material may be land filled; however, material should be covered to minimize generation of airborne dust. This product is not classified as a hazardous waste under RCRA or CERCLA.

SECTION VIII - CONTROL MEASURES/PERSONAL PROTECTION

Inhalation: DO NOT BREATH DUST. In dusty environments, the use of an OSHA, MSHA or NIOSH approved respirator is recommended. Local exhaust can be used, if necessary, to control airborne dust levels.
Eyes: Wear tight fitting goggles.
Skin: The use of barrier creams or impervious gloves, boots and clothing to protect the skin from contact is recommended. Following work, workers should shower with soap and water. Precautions must be observed because burns occur with little warning -- little heat is sensed.
WARN EMPLOYEES AND/OR CUSTOMERS OF THE HAZARDS AND REQUIRED OSHA PRECAUTIONS ASSOCIATED WITH THE USE OF THIS PRODUCT.

NOTE: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products. Customers-users must comply with all applicable health and safety laws, regulations and orders covering silica.

QUIKRETE®
CEMENT & CONCRETE PRODUCTS™

RAPID SETTING REPAIR MATERIALS

MATERIAL SAFETY DATA SHEET
(Complies with OSHA 29 CFR 1910.1200)

SECTION I: PRODUCT IDENTIFICATION

The QUIKRETE® Companies
One Securities Centre
3490 Piedmont Road, Suite 1300
Atlanta, GA 30329

Emergency Telephone Number
(770) 216-9580

Information Telephone Number
(770) 216-9580

MSDS D4
Revision: May-12

QUIKRETE® Product Name	Product #
RAPID ROAD REPAIR	FIBERED 1242-50, UN-FIBERED 1242-52 EXTENDED 1242-80
RAPID HARDENING SAND MIX	1243-50
HYDRAULIC WATER STOP	1126-00
QUICK SETTING CEMENT	1240-00
EXTERIOR USE ANCHORING CEMENT	1245-80, -81
FASTSET™ WATER-STOP CEMENT	1126-00

PRODUCT USE: HYDRAULIC CEMENT-BASED RAPID-SETTING REPAIR MATERIALS

SECTION II - HAZARD IDENTIFICATION

Route(s) of Entry: Inhalation, Skin, Ingestion
Acute Exposure: Product becomes alkaline when exposed to moisture. Exposure can dry the skin, cause alkali burns and affect the mucous membranes. Dust can irritate the eyes and upper respiratory system. Toxic effects noted in animals include, for acute exposures, alveolar damage with pulmonary edema.
Chronic Exposure: Dust can cause inflammation of the lining tissue of the interior of the nose and inflammation of the cornea. Hypersensitive individuals may develop an allergic dermatitis.
Carcinogenicity: Since Portland cement and blended cements are manufactured from raw materials mined from the earth (limestone, marl, sand, shale, etc.) and process heat is provided by burning fossil fuels, trace, but detectable, amounts of naturally occurring, and possibly harmful, elements may be found during chemical analysis. Under ASTM standards, Portland cement may contain 0.75 % insoluble residue. A fraction of these residues may be free crystalline silica. Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs and

possibly cancer. There is evidence that exposure to respirable silica or the disease silicosis is associated with an increased incidence of Scleroderma, tuberculosis and kidney disorders.

Carcinogenicity Listings:	NTP:	Known carcinogen
	OSHA:	Not listed as a carcinogen
	IARC Monographs:	Group 1 Carcinogen
	California Proposition 65:	Known carcinogen

NTP: The National Toxicology Program, in its "Ninth Report on Carcinogens" (released May 15, 2000) concluded that "Respirable crystalline silica (RCS), primarily quartz dusts occurring in industrial and occupational settings, is *known to be a human carcinogen*, based on sufficient evidence of carcinogenicity from studies in humans indicating a causal relationship between exposure to RCS and increased lung cancer rates in workers exposed to crystalline silica dust (reviewed in IAC, 1997; Brown *et al*., 1997; Hind *et al*., 1997)

IARC: The International Agency for Research on Cancer ("IARC") concluded that there was "*sufficient evidence* in humans for the carcinogenicity of crystalline silica in the forms of quartz or cristobalite from occupational sources", and that there is "*sufficient evidence* in experimental animals for the carcinogenicity of quartz or cristobalite." The overall IARC evaluation was that "crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is *carcinogenic to humans (*Group 1)." The IARC evaluation noted that "carcinogenicity was not detected in all industrial circumstances or studies. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." For further information on the IARC evaluation, see IARC Monographs on the Evaluation of carcinogenic Risks to Humans, Volume 68, "Silica, Some Silicates." (1997)

Signs and Symptoms of Exposure: Symptoms of excessive exposure to the dust include shortness of breath and reduced pulmonary function. Excessive exposure to skin and eyes especially when mixed with water can cause caustic burns as severe as third degree.

Medical Conditions Generally Aggravated by Exposure: Individuals with sensitive skin and with pulmonary and/or respiratory disease, including, but not limited to, asthma and bronchitis, or subject to eye irritation, should be precluded from exposure. Exposure to crystalline silica or the disease silicosis is associated with increased incidence of scleroderma, Tuberculosis and possibly increased incidence of kidney lesions.

Chronic Exposure: Dust can cause inflammation of the lining tissue of the interior of the nose and inflammation of the cornea. Hypersensitive individuals may develop an allergic dermatitis. (May contain trace (<0.05 %) amounts of chromium salts or compounds including hexavalent chromium, or other metals found to be hazardous or toxic in some chemical forms. These metals are mostly present as trace substitutions within the principal minerals)

Medical Conditions Generally Aggravated by Exposure: Individuals with sensitive skin and with pulmonary and/or respiratory disease, including, but not limited to, asthma and bronchitis, or subject to eye irritation, should be precluded from exposure.

SECTION III - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components	CAS No.	PEL (OSHA) mg/M^3	TLV (ACGIH) mg/M^3
Silica Sand, crystalline	14808-60-7	$\frac{10}{\%SiO_2+2}$	0.05 (respirable)
Portland Cement	65997-15-1	5	5
May Contain one or more of the following ingredients:			
Amorphous Silica	07631-86-9	$\frac{80\ mg/M^3}{\%\ SiO_2}$	10
Calcium Sulfate	10101-41-4 or 13397-24-5	5	5
Lime	01305-62-0	5	5
Fly Ash	68131-74-8	5	5
Calcium Aluminate Cement	65997-16-2	5	5
Clay	01332-58-7	5	5
Pulverized Limestone	01317-65-3	5	5

Other Limits: National Institute for Occupational Safety and Health (NIOSH). Recommended standard maximum permissible concentration=0.05 mg/M^3 (respirable free silica) as determined by a full-shift sample up to 10-hour working day, 40-hour work week. See NIOSH Criteria for a Recommended Standard Occupational Exposure to Crystalline Silica

SECTION IV – First Aid Measures

Eyes: Immediately flush eye thoroughly with water. Continue flushing eye for at least 15 minutes, including under lids, to remove all particles. Call physician immediately.
Skin: Wash skin with cool water and pH-neutral soap or a mild detergent. Seek medical treatment if irritation or inflammation develops or persists. Seek immediate medical treatment in the event of burns.
Inhalation: Remove person to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. Seek medical help if coughing and other symptoms do not subside. Inhalations of large amounts of Portland cement require immediate medical attention.
Ingestion: Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately.

SECTION V - FIRE AND EXPLOSION HAZARD DATA

Flammability: Noncombustible and not explosive.
Auto-ignition Temperature: Not Applicable
Flash Points: Not Applicable

SECTION VI – ACCIDENTAL RELEASE MEASURES

If spilled, use dustless methods (vacuum) and place into covered container for disposal (if not contaminated or wet). Use adequate ventilation to keep exposure to airborne contaminants below the exposure limit.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND STORAGE

Do not allow water to contact the product until time of use. DO NOT BREATHE DUST. In dusty environments, the use of an OSHA, MSHA or NIOSH approved respirator and tight fitting goggles is recommended.

SECTION VIII – EXPOSURE CONTROL MEASURES

Engineering Controls: Local exhaust can be used, if necessary, to control airborne dust levels.

Personal Protection: The use of barrier creams or impervious gloves, boots and clothing to protect the skin from contact is recommended. Following work, workers should shower with soap and water. Precautions must be observed because burns occur with little warning -- little heat is sensed.

WARN EMPLOYEES AND/OR CUSTOMERS OF THE HAZARDS AND REQUIRED OSHA PRECAUTIONS ASSOCIATED WITH THE USE OF THIS PRODUCT.

Exposure Limits: Consult local authorities for acceptable exposure limits

SECTION IX - PHYSICAL/CHEMICAL CHARACTERISTICS

Appearance: Gray to gray-brown colored powder. Some products contain coarse aggregate.

Specific Gravity:	2.6 to 3.15	**Melting Point:**	>2700°F
Boiling Point:	>2700°F	**Vapor Pressure:**	Not Applicable
Vapor Density:	Not Applicable	**Evaporation Rate:**	Not Applicable
Solubility in Water:	Slight	**Odor:**	Not Applicable

SECTION X - REACTIVITY DATA

Stability: Stable.
Incompatibility (Materials to Avoid): Material when mixed with water will react with Aluminum and other alkali and alkaline earth elements liberating hydrogen gas.
Hazardous Decomposition or By-products: None
Hazardous Polymerization: Will Not Occur.
Condition to Avoid: Keep dry until used to preserve product utility.

SECTION XI – TOXICOLOGICAL INFORMATION

Routes of Entry: Inhalation, Ingestion
Toxicity to Animals:
LD50: Not Available
LC50: Not Available
Chronic Effects on Humans: Conditions aggravated by exposure include eye disease, skin disorders and Chronic Respiratory conditions.
Special Remarks on Toxicity: Not Available

SECTION XII – ECOLOGICAL INFORMATION

Ecotoxicity: Not Available
BOD5 and COD: Not Available
Products of Biodegradation: Not available
Toxicity of the Products of Biodegradation: Not available
Special Remarks on the Products of Biodegradation: Not available

SECTION XIII – DISPOSAL CONSIDERATIONS

Waste Disposal Method: The packaging and material may be land filled; however, material should be covered to minimize generation of airborne dust. This product is not classified as a hazardous waste under the authority of the RCRA (40CFR 261) or CERCLA (40CFR 117&302).

SECTION XIV – TRANSPORT INFORMATION

DOT/UN Shipping Name: Non-regulated
DOT Hazard Class: Non-regulated
Shipping Name: Non-regulated
Non-Hazardous under U.S. DOT and TDG Regulations

SECTION XV – OTHER REGULATORY INFORMATION

US OSHA 29CFR 1910.1200: Considered hazardous under this regulation and should be included in the employers hazard communication program
SARA (Title III) Sections 311 & 312: Qualifies as a hazardous substance with delayed health effects
SARA (Title III) Section 313: Not subject to reporting requirements
TSCA (May 1997): All components are on the TSCA inventory list
Federal Hazardous Substances Act: Is a hazardous substance subject to statues promulgated under the subject act
California Regulation: WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Canadian Environmental Protection Act: Not listed
WHMIS Classification: Considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations (Class D2A, E- Corrosive Material) and subject to the requirements of Health Canada's Workplace Hazardous Material Information (WHMIS). This product has been classified according to the hazard criteria of the Controlled Products Regulation (CPR). This document complies with the WHMIS requirements of the Hazardous Products Act (HPA) and the CPR.

SECTION XVI – OTHER INFORMATION

HMIS-III:

Health –
0 = No significant health risk
1 = Irritation or minor reversible injury possible
2 = Temporary or minor injury possible
3 = Major injury possible unless prompt action is taken
4 = Life threatening, major or permanent damage possible

Flammability-
0 = Material will not burn
1 = Material must be preheated before ignition will occur
2 = Material must be exposed to high temperatures before ignition
3 = Material capable of ignition under normal temperatures
4 = Flammable gases or very volatile liquids; may ignite spontaneously

Physical Hazard-
0 = Material is normally stable, even under fire conditions
1 = Material normally stable but may become unstable at high temps
2 = Materials that are unstable and may undergo react at room temp
3 = Materials that may form explosive mixtures with water
4 = Materials that are readily capable of explosive water reaction

Abbreviations:

ACGIH	American Conference of Government Industrial Hygienists
CAS	Chemical Abstract Service
CERCLA	Comprehensive Environmental Response, Compensation & Liability Act
CFR	Code of Federal Regulations
CPR	Controlled Products Regulations (Canada)
DOT	Department of Transportation
IARC	International Agency for Research
MSHA	Mine Safety and Health Administration
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicity Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TWA	Time-weighted Average
WHMIS	Workplace Hazardous Material Information System

Revision #07-01, supersedes all previous revisions.

Created: 10/25/2006
Last Updated: May 8, 2012

NOTE: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products.

QUIKRETE®
CEMENT & CONCRETE PRODUCTS™

Liquid Cement Colors

MATERIAL SAFETY DATA SHEET
(Complies with OSHA 29 CFR 1910.1200)

SECTION I: PRODUCT IDENTIFICATION

The QUIKRETE® Companies
One Securities Centre
3490 Piedmont Road, Suite 1300
Atlanta, GA 30329

Emergency Telephone Number
(770) 216-9580

Information Telephone Number
(770) 216-9580

MSDS Q3
Revision: Feb-10

QUIKRETE® Product Name	Code #
Cement Color (Liquid)	1317
Mortar and Stucco Color	1319
Liquid Stucco Colors	1323
Liquid Stucco Color Concentrate	5839

SECTION II - HAZARD IDENTIFICATION

Route(s) of Entry: Inhalation, Skin, Ingestion
Acute Exposure: None known
Chronic Exposure: None known
Carcinogenicity: None known
Signs and Symptoms of Exposure: None known
Medical Conditions Generally Aggravated by Exposure: None known
Chronic Exposure: None known
Medical Conditions Generally Aggravated by Exposure: None known

SECTION III - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components	CAS No.	PEL (OSHA) mg/M^3	TLV (ACGIH) mg/M^3
Iron Oxide Pigments[1]	013097-37-1	5	5

[1] Exposure limit as a nuisance dust. A dust hazard is not expected during normal usage of this product.

SECTION IV – First Aid Measures

Eyes: Immediately flush eye thoroughly with water. Continue flushing eye for at least 15 minutes, including under lids, to remove all particles. Call physician immediately.
Skin: Wash skin with cool water and pH-neutral soap or a mild detergent. Seek medical treatment if irritation or inflammation develops or persists. Seek immediate medical treatment in the event of burns.
Inhalation: Remove person to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. Seek medical help if coughing and other symptoms do not subside.
Ingestion: Contact a physician immediately.

SECTION V - FIRE AND EXPLOSION HAZARD DATA

Flammability: Noncombustible and not explosive.
Auto-ignition Temperature: Not Applicable
Flash Points: Not Applicable

SECTION VI – ACCIDENTAL RELEASE MEASURES

If spilled, use common housekeeping, vacuum or scoop material into a container for reclamation or disposal.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND STORAGE

General housekeeping requirements should be followed. Keep containers sealed to preserve product utility.

SECTION VIII – EXPOSURE CONTROL MEASURES

Engineering Controls: General ventilation

Personal Protection: Protective gloves and eyewear are recommended. Ordinary work/hygiene practices should be followed.

Exposure Limits: Consult local authorities for acceptable exposure limits.

SECTION IX - PHYSICAL/CHEMICAL CHARACTERISTICS

Appearance:	Liquid
Color:	Buff, Tan, Brown, Black, Red (Yellow, stucco colors only)
Odor:	None
Melt Point/Freeze Point:	28°F
Boiling Point:	160-200°F
Vapor Pressure:	Not Known

Specific Gravity:	1.7-1.9
Bulk Density:	14-16 lb./gallon
Solubility in Water:	Very slightly
% Volatile by Volume:	Not Known

SECTION X - REACTIVITY DATA

Stability: Stable.
Incompatibility (Materials to Avoid): None
Hazardous Decomposition or By-products: None
Hazardous Polymerization: Will Not Occur.

SECTION XI – TOXICOLOGICAL INFORMATION

Routes of Entry: Inhalation, Ingestion
Toxicity to Animals:
LD50: Not Available
LC50: Not Available
Chronic Effects on Humans: None known
Special Remarks on Toxicity: Not Available

SECTION XII – ECOLOGICAL INFORMATION

Ecotoxicity: Not Available
BOD5 and COD: Not Available
Products of Biodegradation: Not available
Toxicity of the Products of Biodegradation: Not available
Special Remarks on the Products of Biodegradation: Not available

SECTION XIII – DISPOSAL CONSIDERATIONS

Waste Disposal Method: Material which cannot be reclaimed should be dried and landfilled in accordance with local, state and federal regulations. This product is not classified as a hazardous waste under the authority of the RCRA (40CFR 261) or CERCLA (40CFR 117&302).

SECTION XIV – TRANSPORT INFORMATION

DOT/UN Shipping Name: Non-regulated
DOT Hazard Class: Non-regulated
Shipping Name: Non-regulated
Non-Hazardous under U.S. DOT and TDG Regulations

SECTION XV – OTHER REGULATORY INFORMATION

US OSHA 29CFR 1910.1200: Considered hazardous under this regulation and should be included in the employers hazard communication program
SARA (Title III) Sections 311 & 312: Not subject to reporting requirements
SARA (Title III) Section 313: Not subject to reporting requirements
TSCA (May 1997): All components are on the TSCA inventory list
Federal Hazardous Substances Act: Is a hazardous substance subject to statues promulgated under the subject act
Canadian Environmental Protection Act: Not listed
Canadian WHMIS: Considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations and subject to the requirements of WHMIS. This product has been classified according to the hazard criteria of the Controlled Products Regulation (CPR). This document complies with the WHMIS requirements of the Hazardous Products Act (HPA) and the CPR.

SECTION XVI – OTHER INFORMATION

HMIS-III:

Health –
0 = No significant health risk
1 = Irritation or minor reversible injury possible
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3 = Major injury possible unless prompt action is taken
4 = Life threatening, major or permanent damage possible

Flammability-
0 = Material will not burn
1 = Material must be preheated before ignition will occur
2 = Material must be exposed to high temperatures before ignition
3 = Material capable of ignition under normal temperatures
4 = Flammable gases or very volatile liquids; may ignite spontaneously

Physical Hazard-
0 = Material is normally stable, even under fire conditions
1 = Material normally stable but may become unstable at high temps
2 = Materials that are unstable and may undergo react at room temp
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Abbreviations:

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IARC	International Agency for Research
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RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TWA	Time-weighted Average
WHMIS	Workplace Hazardous Material Information System

Created: 11/29/06
Last Updated: February 23, 2010

NOTE: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products.

CEMENT & CONCRETE PRODUCTS™

D2: Packaged Raw Materials

SAFETY DATA SHEET
(Complies with OSHA 29 CFR 1910.1200)

SECTION I: PRODUCT IDENTIFICATION

The QUIKRETE® Companies
One Securities Centre
3490 Piedmont Road, Suite 1300
Atlanta, GA 30305

Emergency Telephone Number
(770) 216-9580
Information Telephone Number
(770) 216-9580

SDS D2
Revision: May-15

QUIKRETE® Product Name	Code #
MASONRY CEMENT-TYPE S	1125-71
MASONRY CEMENT-TYPE N	1125-70
PLASTIC CEMENT	2121-94
MCS CEMENT TYPE MORTAR S (34 KG)	4013-00
PREMIUM PLASTERING CEMENT	1125-98
ALL-STAR MASONRY CEMENT	1121
QUIKRETE® PORTLAND/LIME CEMENT, GRAY TYPE S	1125-20
QUIKRETE® PORTLAND/LIME CEMENT, WHITE TYPE N	1124-06
ZIA MASONRY CEMENT	

PRODUCT USE: HYDRAULIC SPECIALTY CEMENTS FOR USE IN MASONRY MORTARS AND STUCCOS

SECTION II - HAZARD IDENTIFICATION

Hazard-determining components of labeling: Silica, Portland cement

2.1 Classification of the substance or mixture

Carcinogen – Category 1A
Skin Corrosion – Category 1B
Skin Sensitization – Category 1B
Specific Target Organ Toxicity Repeat Exposure – Category 1
Specific Target Organ Toxicity: Single Exposure – Category 3

2.2a Signal word DANGER!

2.2b Hazard Statements

May cause cancer through chronic inhalation
Causes severe skin burns and serious eye damage
May cause an allergic skin reaction
Causes damage to lungs through prolonged or repeated inhalation
May cause respiratory irritation

2.2c Pictograms

2.2d Precautionary statements
Do not handle until all safety precautions have been read and understood.
Wear impervious gloves, such as nitrile. Wear eye protection, and protective clothing.
Do not eat, drink or smoke when using this product.
Wash thoroughly after handling.
Use only in a well-ventilated area.
Do not breathe dust.

If swallowed: Rinse mouth. Do NOT induce vomiting.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If on skin (or hair): Remove immediately all contaminated clothing and wash before re-use. Rinse skin or hair with water.
If significant skin irritation or rash occurs: get medical advice or attention.

Immediately seek medical advice or attention if symptoms are significant or persist.

Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/containers in accordance with all regulations.

2.3 Additional Information

2.3a HNOC – Hazards not otherwise classified: Not applicable

2.3b Unknown Acute Toxicity: None
2.3C WHMIS Classification
Class D2B – Skin/Eye Irritant
Class D2A – Chronic Toxic Effects – Carcinogen

Class E – Corrosive Material

2.3d Label Elements According To WHMIS
Hazard Symbols

Signal Word
DANGER!

SECTION III - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components	CAS No.	% by Weight
Portland Cement	65997-15-1	60-80
Limestone	1317-55-3	20-40
Sand, Silica, Quartz	14808-60-7	<1

*The concentrations ranges are provided due to batch-to-batch variability.
None of the constituents of this material are of unknown toxicity.

SECTION IV – FIRST AID MEASURES

4.1 Description of the first-aid measures
General information:
After inhalation: Remove person to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. In case of unconsciousness, place patient stably in side position for transportation.
After skin contact: Wash skin with cool water and pH-neutral soap or a mild detergent. If significant skin irritation or rash occurs: get medical advice or attention.
After eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
After swallowing: Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms/effects, acute and delayed
Inhalation: May cause respiratory tract irritation. Causes damage to organs through prolonged or repeated inhalation. This product contains crystalline silica. Prolonged or repeated inhalation of respirable silica from this product can cause silicosis.

Skin contact: Causes skin irritation. Handling can cause dry skin, discomfort, irritation, and dermatitis. May cause sensitization by skin contact. Product becomes extremely alkaline when exposed to moisture, and can cause alkali burns and affect the mucous membranes.

Eye Contact: Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Ingestion: May be harmful if swallowed. Ingestion may cause discomfort and/or distress, nausea or vomiting.

4.3 Indication of immediate medical attention and special treatment needed:
Immediately seek medical advice or attention if symptoms are significant or persist.

SECTION V - FIRE FIGHTING MEASURES

5.1 Flammability of the Product: Non-flammable and non-combustible
5.2 Suitable extinguishing agents: Treat for surrounding material
5.3 Special hazards arising from the substance or mixture: None
5.3a Products of Combustion: None
5.3b Explosion Hazards in Presence of Various Substances: Non-explosive in presence of shocks

SECTION VI – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Wear personal protective equipment (See section VIII). Keep unprotected persons away.

6.2 Methods and material for containment and cleaning up:
Do not allow to enter sewers/ surface or ground water. Dispose of unwanted materials and containers properly in accordance with all regulations.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND STORAGE

7.1 Handling
Precautions for safe handling: Ensure good ventilation/exhaustion at the workplace. DO NOT BREATHE DUST. In dusty environments, the use of an OSHA, MSHA or NIOSH approved respirator and tight fitting goggles is recommended. Wear appropriate PPE (See section 8).Do not

mix with other chemical products, except as indicated by the manufacturer. Do not get in eyes, on skin or clothing. Good housekeeping is important to prevent accumulation of dust.

7.2 Storage
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: Keep out of the reach of children. Keep container tightly closed and prevent exposure to humidity. Do not allow water to contact the product until time of use to preserve product utility.

SECTION VIII – EXPOSURE CONTROL MEASURES / PERSONAL PROTECTION

8.1 Components with limit values that require monitoring at the workplace:

Hazardous Components	CAS No.	PEL (OSHA) mg/M^3	TLV (ACGIH) mg/M^3
Silica Sand, crystalline	14808-60-7	0.1	0.025 (resp)
Portland Cement	65997-15-1	5 (resp) 15 (total)	10 (resp)

8.2 Exposure Controls
Use ventilation adequate to keep exposures below recommended exposure limits.

8.3 General protective and hygienic measures
Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

8.3a Personal protective equipment

Protection of hands:
Wear gloves of adequate length to offer appropriate skin protection from splashes. Nitrile, Butyl and PVC gloves have been found to offer adequate protection for incidental contact.

Eye protection:
Wear approved eye protection (properly fitted dust- or splash-proof chemical safety glasses.

Respiratory protection:
A NIOSH-approved dust mask or filtering face piece is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. Respirators should be selected by and used under the direction of a trained health and safety professional, following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2).

SECTION IX - PHYSICAL/CHEMICAL CHARACTERISTICS

General Information

Appearance	Form: Granular Solid
	Color: Gray to gray-brown colored
	Odor: None
pH-value at 20°C (68 °F):	13 (10%)
Boiling point/Boiling range:	Not applicable
Flash point:	Not applicable
Auto igniting:	Product is not self-igniting
Vapor pressure at 21°C (70°F)	Not available
Density at 25°C (77 °F):	3.15

Solubility in / Miscibility with	
Water:	Insoluble
VOC content:	0 g/L VOC

SECTION X – STABILITY AND REACTIVITY

10.1 Reactivity
No dangerous reaction known under conditions of normal use.
10.2 Chemical stability
Stable under normal storage conditions. Keep in dry storage.
10.3 Possibility of hazardous reaction
No dangerous reaction known under conditions of normal use.
10.4 Thermal decomposition / conditions to be avoided
No decomposition if used according to specifications.
10.5 Incompatible materials
Contact of silica with powerful oxidizing agents such as fluorine, chlorine trifluoride, manganese trioxide, or oxygen difluoride may cause fires
10.6 Hazardous Decomposition or By-products
Silica will dissolve in Hydrofluoric Acid and produce a corrosive gas – silicon tetrafluoride.

SECTION XI – TOXICOLOGICAL INFORMATION

11.1 Exposure Routes: Skin contact, skin adsorption, eye contact, inhalation, or ingestion.

11.2 Symptoms related to physical/chemical/toxicological characteristics:

Inhalation: May cause respiratory tract irritation. Causes damage to organs through prolonged or repeated exposure. This product contains crystalline silica. Prolonged or repeated inhalation of respirable silica from this product can cause silicosis.

Skin contact: Causes skin irritation. Handling can cause dry skin, discomfort, irritation, and dermatitis. May cause sensitization by skin contact. Product becomes extremely alkaline when exposed to moisture, and can cause alkali burns and affect the mucous membranes.

Eye Contact: Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Ingestion: Harmful if swallowed. Ingestion may cause discomfort and/or distress, nausea or vomiting.

11.3 Delayed, immediate and chronic effects of short-term and long-term exposure

Short Term

Skin Corrosion/Irritation: Causes severe skin burns.
Serious Eye Damage/Irritation: Causes severe eye damage.
Respiratory Sensitization: Not available
Skin Sensitization: May cause an allergic skin reaction.
Specific Target Organ Toxicity-Single Exposure: (Category 3) May cause respiratory irritation.
Aspiration Hazard: Not available

Long Term

Carcinogenicity: May cause cancer through chronic inhalation.
Germ Cell Mutagenicity: Not available
Reproductive Toxicity: Not available
Specific Target Organ Toxicity- Repeated Exposure: (Category 1) Causes damage to lungs through prolonged/repeated exposure
Synergistic/Antagonistic Effects: Not available.

SECTION XII – ECOLOGICAL INFORMATION

12.1 Ecotoxicity

May cause long-term adverse effects to the aquatic environment. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Must not reach bodies of water or drainage ditch undiluted or un-neutralized

12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulative potential:

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

12.5 Other Adverse Effects
No further relevant information available.

SECTION XIII – DISPOSAL CONSIDERATIONS

13.1 Waste Disposal Method
The packaging and material may be land filled; however, material should be covered to minimize generation of airborne dust. This product is not classified as a hazardous waste under the authority of the RCRA (40CFR 261) or CERCLA (40CFR 117&302). Disposal must be made in accordance with local, state and federal regulations.

13.2 Other disposal considerations
Uncleaned packaging
Recommendation: Disposal must be made in accordance with local, state and federal regulations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

SECTION XIV – TRANSPORT INFORMATION

	DOT (U.S.)	TDG (Canada)
UN-Number	Not Regulated	Not Regulated
UN proper shipping name	Not Regulated	Not Regulated
Transport Hazard Class(es)	Not Regulated	Not Regulated
Packing Group (if applicable)	Not Regulated	Not Regulated

14.1 Environmental hazards:
Not Available

14.2 Transport in bulk according to Annex II of Marpol 73/78 and the IBC Code
Not available

14.3 Special precautions for user
Do not handle until all safety precautions have been read and understood.

SECTION XV – OTHER REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislations specific for the chemical

Canada

WHMIS Classification: Considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations and subject to the requirements of Health Canada's Workplace Hazardous Material Information (WHMIS). This document complies with the WHMIS requirements of the Hazardous Products Act (HPA) and the CPR.

15.2 US Federal Information

SARA 302/311/312/313 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302, 311, 312 or 313.
RCRA: Crystalline silica (quartz) is not classified as a hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR §261 et seq.
CERCLA: Crystalline silica (quartz) is not classified as a hazardous substance under regulations of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 40 CFR §302.
Emergency Planning and Community Right to Know Act (SARA Title III): Crystalline silica (quartz) is not an extremely hazardous substance under Section 302 and is not a toxic chemical subject to the requirements of Section 313.
FDA: Silica is included in the list of substances that may be included in coatings used in food contact surfaces, 21 CFR §175.300(b)(3)(xxvi).
NTP: Respirable crystalline silica, primarily quartz dusts occurring in industrial and occupational settings, is classified as Known to be a Human Carcinogen.
OSHA Carcinogen: Crystalline silica (quartz) is not listed.

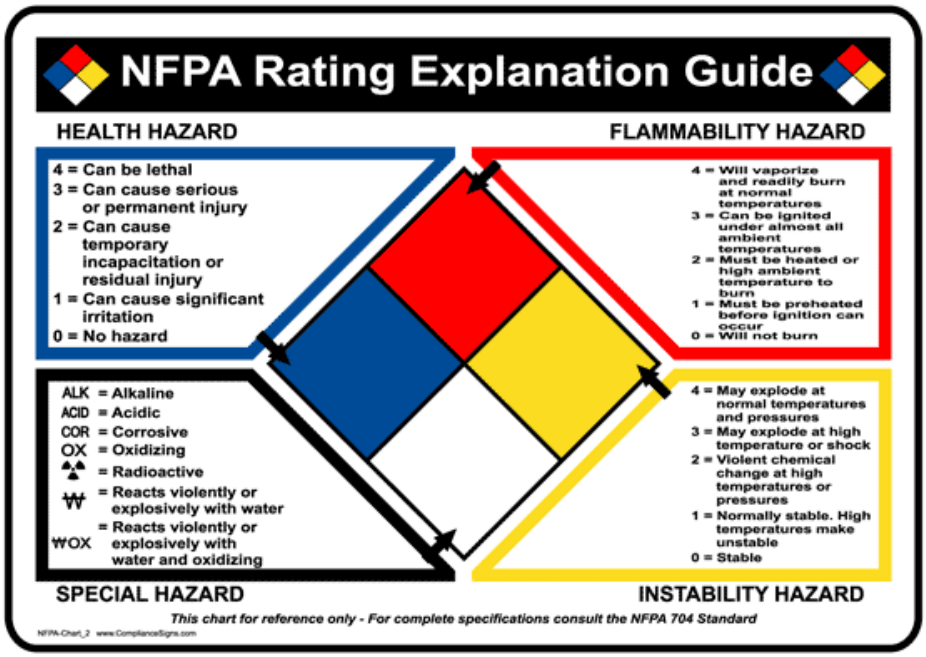
15.3 State Right to Know Laws

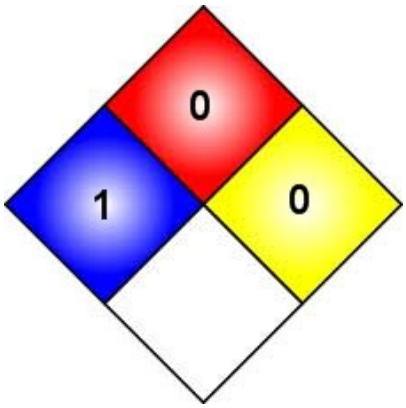
California Prop. 65 Components
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
California Inhalation Reference Exposure Level (REL): California established a chronic REL of 3 µg for silica (crystalline, respirable). A chronic REL is an airborne level of a substance at or below which no adverse health effects are anticipated in individuals indefinitely exposed to the substance at that level.
Massachusetts Toxic Use Reduction Act: Silica, crystalline (respirable size, <10 microns) is "toxic" for purposes of the Massachusetts Toxic Use Reduction Act.

15.4 Global Inventories

DSL All components of this product are on the Canadian DSL list.
TSCA No.: Crystalline silica (quartz) appears on the EPA TSCA inventory under the CAS No. 14808-60-7. All constituents are listed in the TSCA inventory.

15.5 NFPA Ratings





SECTION XVI – OTHER INFORMATION

Last Updated: May 27, 2015

NOTE: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products.

Prepared by

The QUIKRETE® Companies
Phone (800) 282-5828
www.QUIKRETE.com

End of SDS

Material Safety Data Sheet
[OSHA 29 CFR 1910.1200]

The QUIKRETE® Companies
One Securities Centre
3490 Piedmont Road, Suite 1300
Atlanta, GA 30329

Emergency Telephone Number
(770) 216-9580

Information Telephone Number
(770) 216-9580

Revision: October 2003

MSDS E

SECTION I: PRODUCT IDENTIFICATION

Product Types: QUIKRETE® DRY PACKAGED PORTLAND CEMENT BASED PRODUCTS (SERIES 4)

QUIKRETE® Product Name	Code #	QUIKRETE® Product Name	Code #
MORTAR MIX	1102	MASON MIX	1136
BASE COAT STUCCO	1139	EXTERIOR STUCCO	1209
FINISH COAT STUCCO	1201	FOAM COATING	1219
MASONRY COATING	2400	MARBLE STUCCO	1802
QUIKWALL® SURFACE BONDING CEMENT	1230	HEAVY DUTY MASONRY COATING	1300
POOL PLASTER	1319	GLASS BLOCK MORTAR	1610
ROOF TILE MORTAR	1140	POOL FINISH	1800
POLYMER MODIFIED SANDED TILE GROUT	1489	SANDED TILE GROUT	1156
THIN-SET FLOOR MIX	1548	THIN-SET WALL MIX	1554
OMNI GROUT SANDED	1490	THIN-SET MULTI-PURPOSE	1550
PEBBLE FINISH	1806	THIN-SET SANDED	1547
BULK MASONRY MORTARS	1162	INCA 1000 MINE SEALANT	1225-50
FIBERGLASS REINFORCED STUCCO CONCENTRATED (FORMERLY KNOWN AS ONE COAT FIBER REINFORCED STUCCO CONCENTRATED)			1216-93
QUIKRETE® ONE COAT FIBERGLASS REINFORCED STUCCO & CONCENTRATED (FORMERLY KNOWN AS QWIKWALL FIBERGLASS REINFORCED STUCCO, CONCENTRATED)			1200, 1216

(ALSO APPLIES TO SPECIALTY AND/OR CUSTOM DESIGNED MORTARS & STUCCOS)

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components	CAS No.	PEL (OSHA) mg/M^3	TLV (ACGIH) mg/M^3
Silica Sand, crystalline	14808-60-7	$\frac{10}{\%SiO_2+2}$	0.05 (respirable)
Portland Cement	65997-15-1	5	5
May Contain one or more of the following ingredients:			
Pulverized Limestone	01317-65-3	5	5
Iron Oxide Pigments	01309-37-1	5	5
Lime	01305-62-0 or 39445-23-3	5	5
Clay	01332-58-7	5	5

Other Limits: National Institute for Occupational Safety and Health (NIOSH). Recommended standard maximum permissible concentration=0.05 mg/M^3 (respirable free silica) as determined by a full-shift sample up to 10-hour working day, 40-hour work week. See NIOSH Criteria for a Recommended Standard Occupational Exposure to Crystalline Silica.

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Appearance: Gray to gray-brown colored powder. Some products contain coarse aggregate. (Quikrete Vinyl Concrete Patcher available in white)

Specific Gravity:	2.6 to 3.15	**Melting Point**	2700 ^{o}F	**Boiling Point:**	2700 ^{o}F
Vapor Pressure:	None	**Vapor Density:**	None	**Evaporation Rate:**	None
Solubility in Water:	Slight	**Odor:**	None		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flammability: Noncombustible and not explosive.

SECTION V - REACTIVITY DATA

Stability: Stable.
Incompatibility (Materials to Avoid): Contact of silica with powerful oxidizing agents such as fluorine, chlorine trifluoride, manganese trioxide, oxygen difluoride, may cause fires.
Hazardous Decomposition or By-products: Silica will dissolve in Hydrofluoric Acid and produce a corrosive gas - silicon tetrafluoride.
Hazardous Polymerization: Will Not Occur.
Condition to Avoid: Keep dry until used to preserve product utility.

SECTION VI - HEALTH HAZARD DATA

Route(s) of Entry: Inhalation, Skin, Ingestion
Acute Exposure: Product becomes alkaline when exposed to moisture. Exposure can dry the skin, cause alkali burns and effect the mucous membranes. Dust can irritate the eyes and upper respiratory system. Toxic effects noted in animals include, for acute exposures, alveolar damage with pulmonary edema.
Chronic Exposure: Dust can cause inflammation of the lining tissue of the interior of the nose and inflammation of the cornea. Hypersensitive individuals may develop an allergic dermatitis. Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs and possibly cancer. There is evidence that exposure to respirable silica or the disease silicosis is associated with an increased incidence of Scleroderma, tuberculosis and kidney disorders.

Carcinogenicity Listings:	NTP:	Known carcinogen
	OSHA:	Not listed as a carcinogen
	IARC Monographs:	Group 1 Carcinogen
	California Proposition 65:	Known carcinogen

NTP: The National Toxicology Program, in its "Ninth Report on Carcinogens" (released May 15, 2000) concluded that "Respirable crystalline silica (RCS), primarily quartz dusts occurring in industrial and occupational settings, is *known to be a human carcinogen*, based on sufficient evidence of carcinogenicity from studies in humans indicating a causal relationship between exposure to RCS and increased lung cancer rates in workers exposed to crystalline silica dust (reviewed in IAC, 1997; Brown *et al*., 1997; Hind *et al*., 1997)
IARC: The International Agency for Research on Cancer ("IARC") concluded that there was "*sufficient evidence* in humans for the carcinogenicity of crystalline silica in the forms of quartz or cristobalite from occupational sources", and that there is "*sufficient evidence* in experimental animals for the carcinogenicity of quartz or cristobalite." The overall IARC evaluation was that "crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is *carcinogenic to humans (*Group 1)." The IARC evaluation noted that "carcinogenicity was not detected in all industrial circumstances or studies. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." For further information on the IARC

evaluation, see IARC Monographs on the Evaluation of carcinogenic Risks to Humans, Volume 68, "Silica, Some Silicates..." (1997)

Signs and Symptoms of Exposure: Symptoms of excessive exposure to the dust include shortness of breath and reduced pulmonary function. Excessive exposure to skin and eyes especially when mixed with water can cause caustic burns as severe as third degree.

Medical Conditions Generally Aggravated by Exposure: Individuals with sensitive skin and with pulmonary and/or respiratory disease, including, but not limited to, asthma and bronchitis, or subject to eye irritation, should be precluded from exposure. Exposure to crystalline silica or the disease silicosis is associated with increased incidence of scleroderma, Tuberculosis and possibly increased incidence of kidney lesions.

Emergency First Aid Procedures:

Eyes: Immediately flush eye thoroughly with water. Continue flushing eye for at least 15 minutes, including under lids, to remove all particles. Call physician immediately.

Skin: Wash skin with cool water and pH-neutral soap or a mild detergent. Seek medical treatment if irritation or inflammation develops or persists. Seek immediate medical treatment in the event of burns.

Inhalation: Remove person to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. Seek medical help if coughing and other symptoms do not subside. Inhalation of large amounts of portland cement require immediate medical attention.

Ingestion: Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Spills: If spilled, use dustless methods (vacuum) and place into covered container for disposal or use if not contaminated or wet. Use adequate ventilation.

Waste Disposal Method: The packaging and material may be land filled; however, material should be covered to minimize generation of airborne dust. This product is not classified as a hazardous waste under RCRA or CERCLA.

SECTION VIII - CONTROL MEASURES/PERSONAL PROTECTION

Inhalation: DO NOT BREATE DUST. In dusty environments, the use of an OSHA, MSHA or NIOSH approved respirator is recommended. Local exhaust can be used, if necessary, to control airborne dust levels.

Eyes: Wear tight fitting goggles.

Skin: The use of barrier creams or impervious gloves, boots and clothing to protect the skin from contact is recommended. Following work, workers should shower with soap and water. Precautions must be observed because burns occur with little warning -- little heat is sensed.

WARN EMPLOYEES AND/OR CUSTOMERS OF THE HAZARDS AND REQUIRED OSHA PRECAUTIONS ASSOCIATED WITH THE USE OF THIS PRODUCT.

NOTE: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products.

QUIKRETE®
CEMENT & CONCRETE PRODUCTS™

ACRYLIC CRACK FILLERS

MATERIAL SAFETY DATA SHEET
(Complies with OSHA 29 CFR 1910.1200)

SECTION I: PRODUCT IDENTIFICATION

The QUIKRETE® Companies
One Securities Centre
3490 Piedmont Road, Suite 1300
Atlanta, GA 30329

Emergency Telephone Number
(770) 216-9580

Information Telephone Number
(770) 216-9580

MSDS W3
Revision: Feb-07

QUIKRETE® Product Name	Product #
BLACKTOP REPAIR	8630-10
MORTAR REPAIR	8620-09
CONCRETE REPAIR	8620-10

PRODUCT USE: COSMETIC CRACK FILLER FOR CONCRETE OR ASPHALT

SECTION II - HAZARD IDENTIFICATION

Route(s) of Entry: Inhalation, ingestion, skin
Acute Exposure: Inhalation of vapor or mist can cause the following: headache, nausea, irritation of nose, throat and lungs. Direct contact with eyes can cause irritation and possible corneal injury.
Chronic Exposure: None known
Carcinogenicity: Not carcinogenic
Carcinogenicity Listings: Not applicable
Medical Conditions Generally Aggravated by Exposure: None known

SECTION III - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components	CAS No.	PEL (OSHA) mg/M^3	TLV (ACGIH) mg/M^3
Limestone/Marble	1317-65-3	5	5
Acrylic Polymer	Not Hazardous	None	None
May contain:			
Titanium Dioxide	13463-67-7	15	10

SECTION IV – First Aid Measures

Eyes: Immediately flush eye thoroughly with water – do not rub eyes. Continue flushing eye for at least 15 minutes, including under lids, to remove all particles. Call physician immediately.
Skin: Wash skin with cool water and pH-neutral soap or a mild detergent. Seek medical treatment if irritation or inflammation develops or persists.
Inhalation: Remove person to fresh air. If coughing and other symptoms develop, seek medical attention.
Ingestion: If swallowed, give two glasses of water; If large amounts are ingested, induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION V - FIRE AND EXPLOSION HAZARD DATA

Flammability: Noncombustible and not explosive.
Auto-ignition Temperature: Not Applicable
Flash Points: Product may contain less than 1% of a solvent with a Flash Point of 120°C (248°F)
Unusual Hazards: This water-based dispersion can splatter at temperatures above 100°C (212°F). Polymer film can burn once the water has evaporated.

SECTION VI – ACCIDENTAL RELEASE MEASURES

Contain spills immediately with inert materials (eg. Sand, earth). Scrape up and allow to harden before disposal. Use detergent and water to remove the remaining residue.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND STORAGE

Keep from freezing; material may coagulate. The minimum recommended storage temperature for this material is 1°C (34°F). The maximum recommended storage temperature for this material is 38°C (100°F).

SECTION VIII – EXPOSURE CONTROL MEASURES

Engineering Controls: Not applicable

Personal Protection: The use of neoprene gloves is recommended.

Exposure Limits: Consult local authorities for acceptable exposure limits

SECTION IX - PHYSICAL/CHEMICAL CHARACTERISTICS

Appearance: White or tinted viscous liquid.
Boiling Point: ~100°C (212°F)

Solubility in Water: Dilutable
Odor: slight ether and ammonia odor

SECTION X - REACTIVITY DATA

Stability: This material is considered stable. Avoid temperatures above 177°C (350°F), the onset of polymeric decomposition. Thermal decomposition is dependent on time and temperature.
Incompatibility (Materials to Avoid): Avoid contact with strong oxidizing agents or strong alkalis.
Hazardous Decomposition or By-products: Thermal decomposition may yield acrylic monomers
Hazardous Polymerization: Will Not Occur.
Condition to Avoid: Maintain storage temperature between 1°C (34°F) and 38°C (100°F) to retain product utility.

SECTION XI – TOXICOLOGICAL INFORMATION

Routes of Entry: Inhalation, Ingestion
Toxicity to Animals:
LD50: Not Available
LC50: Not Available
Chronic Effects on Humans: Not Available
Special Remarks on Toxicity: Not Available

SECTION XII – ECOLOGICAL INFORMATION

Ecotoxicity: Not Available
BOD5 and COD: Not Available
Products of Biodegradation: Not available
Toxicity of the Products of Biodegradation: Not available
Special Remarks on the Products of Biodegradation: Not available

SECTION XIII – DISPOSAL CONSIDERATIONS

Waste Disposal Method: The packaging and material may be land filled once hardened. This product is not classified as a hazardous waste under the authority of the RCRA (40CFR 261) or CERCLA (40CFR 117&302).

SECTION XIV – TRANSPORT INFORMATION

DOT/UN Shipping Name: Non-regulated
DOT Hazard Class: Non-regulated
Shipping Name: Non-regulated
Non-Hazardous under U.S. DOT and TDG Regulations

SECTION XV – OTHER REGULATORY INFORMATION

US OSHA 29CFR 1910.1200: Considered hazardous under this regulation and should be included in the employers hazard communication program
SARA (Title III) Sections 311 & 312: Qualifies as a hazardous substance with delayed health effects
SARA (Title III) Section 313: Not subject to reporting requirements
TSCA (May 1997): All components are on the TSCA inventory list
Federal Hazardous Substances Act: Is a hazardous substance subject to statues promulgated under the subject act
Canadian Environmental Protection Act: Not listed
Canadian WHMIS: Considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations and subject to the requirements of Health Canada's Workplace Hazardous Material Information (WHMIS). This product has been classified according to the hazard criteria of the Controlled Products Regulation (CPR). This document complies with the WHMIS requirements of the Hazardous Products Act (HPA) and the CPR.

SECTION XVI – OTHER INFORMATION

HMIS-III:

Health –
0 = No significant health risk
1 = Irritation or minor reversible injury possible
2 = Temporary or minor injury possible
3 = Major injury possible unless prompt action is taken
4 = Life threatening, major or permanent damage possible

Flammability-
0 = Material will not burn
1 = Material must be preheated before ignition will occur
2 = Material must be exposed to high temperatures before ignition
3 = Material capable of ignition under normal temperatures
4 = Flammable gases or very volatile liquids; may ignite spontaneously

Physical Hazard-
0 = Material is normally stable, even under fire conditions
1 = Material normally stable but may become unstable at high temps
2 = Materials that are unstable and may undergo react at room temp
3 = Materials that may form explosive mixtures with water
4 = Materials that are readily capable of explosive water reaction

Abbreviations:

ACGIH	American Conference of Government Industrial Hygienists
CAS	Chemical Abstract Service
CERCLA	Comprehensive Environmental Response, Compensation & Liability Act
CFR	Code of Federal Regulations
CPR	Controlled Products Regulations (Canada)
DOT	Department of Transportation
IARC	International Agency for Research
MSHA	Mine Safety and Health Administration
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicity Program

OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TWA	Time-weighted Average
WHMIS	Workplace Hazardous Material Information System

Revision #07-01, supersedes all previous revisions.
Created: 10/25/2006
Last Updated: February 7, 2007

NOTE: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products.

QUIKRETE®
CEMENT & CONCRETE PRODUCTS™

Polyurethane Construction Adhesive

MATERIAL SAFETY DATA SHEET
(Complies with OSHA 29 CFR 1910.1200)

SECTION I: PRODUCT IDENTIFICATION

The QUIKRETE® Companies
One Securities Centre
3490 Piedmont Road, Suite 1300
Atlanta, GA 30329

Emergency Telephone Number
(770) 216-9580

Information Telephone Number
(770) 216-9580

MSDS X3
Revision: Jun-11

QUIKRETE® Product Name	Code #
POLYURETHANE CONSTRUCTION ADHESIVE	9902-10
POLYURETHANE MORTAR JOINT SEALANT	8620-18
POLYURETHANE CONCRETE CRACK SEALANT	8620-17

PRODUCT USE: POLYURETHANE BASED SEALANTS FOR USE IN GENERAL CONSTRUCTION

SECTION II – HAZARDS IDENTIFICATION

Please note that as a service to our customers, hazard warnings and information have been included for ALL chemicals listed in this MSDS. However, not all of these chemicals are defined as "hazardous" by ISO or OSHA standards. Only those chemicals listed in Section 2 of this MSDS are defined by ISO and/or OSHA as "hazardous" based upon the properties and concentrations of each chemical.

MOST IMPORTANT HAZARDS

EYE: Direct contact irritates moderately with redness and swelling. Calcium carbonate, xylene, calcium oxide, and MDI may cause severe eye irritation, especially in dust form. Butyl benzyl phthalate (BBP) may cause irritation with symptoms of redness and itching.

SKIN: A single short exposure (less than 24 hours) may irritate. Repeated prolonged contact (24 to 48 hours) may irritate moderately. Product contains calcium carbonate, xylene, and calcium oxide, which are possible skin sensitizers. Contact with BBP may cause irritation with symptoms of redness and itching. MDI may cause irritation to the skin or mucous membranes. Ethyl benzene may be absorbed through the skin.

INHALATION: Vapor overexposure, and/or inhalation of silica or calcium oxide dust may severely irritate eyes, nose, throat, upper respiratory tract, and lungs. Vapor overexposure

may cause drowsiness. Excessive inhalation of calcium carbonate (dust form) may result in shortness of breath or reduced pulmonary function. Inhalation of high concentrations of BBP, xylene, or ethyl benzene may cause respiratory irritation or difficulties and central nervous system effects characterized by headache, nausea, dizziness, and/or drowsiness. MDI vapors or mist can cause irritation of upper respiratory tract: signs/symptoms can include soreness of the nose and throat, coughing, and sneezing. Persons previously sensitized to isocyanates may experience an allergic respiratory reaction: signs/symptoms can include difficulty breathing, wheezing, tightness of chest, and respiratory failure. Overexposure to titanium dioxide (dust form) may cause pulmonary fibrosis (scarring of the lungs).

ORAL: Small amounts transferred to the mouth by fingers during use, etc. should not injure. Swallowing large amounts may cause digestive discomfort and gastrointestinal irritation. Ingestion of BBP may cause central nervous system depression with symptoms seen in acute inhalation. Ingestion of xylene may cause central nervous system effects. Aspiration of xylene or ethyl benzene into lungs may cause chemical pneumonitis.

SECTION III - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

This product consists of a mixture/preparation.

CAS NO.	INGREDIENT	WT %	LETHAL DOSES	EXPOSURE LIMITS						
					TWA		STEL		Ceiling	
					ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3
85-68-7	Butyl Benzyl Phthalate (BBP)	15-40	Inhalation TCLo – 789 mg/m^3/6hr (rat)	OSHA	No exposure limit guidelines have been established for this material.					
			Oral LD50 – 2,330 mg/kg (rat)	NIOSH						
			Dermal LD50 – 6,700 mg/kg (rat)	ACGIH						
				CANADA						
1317-65-3	Calcium Carbonate [a] (Limestone)	3-7	Oral LD50 – 7,340 mg/kg (rat)	OSHA	-	15, 5 [b]	-	-	-	-
				NIOSH	-	10, 5 [b]	-	-	-	-
				ACGIH	-	10	-	-	-	-
				CANADA	-	10, 5 [b]	-	-	-	-
1305-78-8	Calcium Oxide [a]	1-5	Not established	OSHA	-	5	-	-	-	-
				NIOSH	-	2 [c]	-	-	-	-
				ACGIH	-	2	-	-	-	-
				CANADA	-	2	-	4	-	-
13463-67-7	Titanium dioxide [a]	1-5	Inhalation TCLo – 250 mg/m^3/6hr (rat)	OSHA	-	15 [d]	-	-	-	-
			Oral LD50 – >24,000 mg/kg (rat)	NIOSH	e	-	-	-	-	-
			Dermal LD50 – >10,000 mg/m^3 (rabbit)	ACGIH	-	10	-	-	-	-
				CANADA	-	10, 5 [b]	-	-	-	-
1330-20-7	Xylene	1-5	Inhalation LC50 – 5,000 ppm/4hr (rat)	OSHA	100	435	-	-	-	-

CAS NO.	INGREDIENT	WT %	LETHAL DOSES	EXPOSURE LIMITS						
					TWA		STEL		Ceiling	
					ppm	mg/m^3	ppm	mg/m^3	ppm	mg/m^3
			Oral LD50 – 4,300 mg/kg (rat)	NIOSH	100	435	150	655	-	-
			Dermal LD50 – >1,700 mg/kg (rabbit)	ACGIH [f]	100	434	150	651	-	-
				CANADA	100	434	150	652	-	-
101-68-8	Diphenylmethane diisocyanate (MDI)	0.5-1.5	Inhalation LC50 – 178 mg/m^3 (rat)	OSHA	-	-	-	-	0.02	0.2
				NIOSH	0.005	0.050	-	-	0.020 [g]	0.2 [g]
			Oral LD50 – 2,200 mg/kg (mouse)	ACGIH	0.005	0.051	-	-	-	-
				CANADA	0.005	0.051	-	-	0.02	0.2
100-41-4	Ethyl benzene	0.1-1.0	Oral LD50 – 3,500 mg/kg (rat)	OSHA	100	435	-	-	-	-
			Dermal LD50 – 17,800 µL/kg (rabbit)	NIOSH	100	435	125	545	-	-
			Inhalation LCLo – 4,000 ppm/4hr (rat)	ACGIH [f]	100	434	125	543	-	-
				CANADA	100	434	125	542	-	-
14808-60-7	Silica, crystalline [a] (Silica, quartz)	< 0.1	Implant TDLo – 900 mg/kg (rat)	OSHA	-	30, 10 [b, h]	-	-	-	-
				NIOSH	-	0.5	-	-	-	-
			Inhalation TCLo – 300 µg/m^3 (human)	ACGIH	-	0.5 [i]	-	-	-	-
			Intravenous LDLo – 40 mg/kg (mouse)	CANADA	-	0.3, 0.1 [b]	-	-	-	-

[a] Under normal conditions of use, no respirable particles should be released from this product.
[b] Total mass; respirable mass, respectively.
[c] NIOSH permissible exposure limits for calcium oxide are as follows: TWA 2 mg/m^3; IDLH 25 mg/m^3
[d] OSHA – Total dust.
[e] NIOSH – No threshold has been determined; limit occupational exposure to lowest feasible concentration.
[f] ACGIH – Biological Exposure Index (BEI).
[g] NIOSH – Value based on an exposure time of 10 minutes.
[h] OSHA PEL: Silica, Crystalline (Silica, Quartz) – respirable dust: TWA 10 mg/m^3 divided by (%SiO_2+2); total dust: TWA 30 mg/m^3 divided by (%SiO_2+2) (Source: NIOSH Pocket Guide to Hazardous Chemicals).
[i] Respirable mass.

SECTION IV – FIRST-AID PROCEDURES

INHALATION: Remove to fresh air. If ill effects persist get medical attention.
SKIN CONTACT: Remove from skin and wash thoroughly with soap and water or waterless cleanser. Get medical attention if irritation or other ill effects develop or persist.

EYE CONTACT: Immediately flush with water for 15 minutes. Get medical attention.
INGESTION: Get medical attention.
COMMENTS: Treat according to person's condition and specifics of exposure.

SECTION V – FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA: Carbon Dioxide (CO_2), water fog dry chemical, foam.
UNSUITABLE EXTINGUISHING MEDIA: Water.
SPECIFIC FIRE HAZARDS: Precipitated calcium carbonate will ignite on contact with fluorine.
FIRE FIGHTING PROCEDURES: Wear full protective clothing including helmet, self contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist, and legs, face mask, and protective covering for exposed areas of the head. Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. If large amount is involved, evacuate area.

FLASH POINT (SETAFLASH): Greater than 65°C (150°F)

FLAMMABILITY LIMITS IN AIR (XYLENE): LEL: 1%
UEL: 8%

HAZARDOUS DECOMPOSITION PRODUCTS: By high heat and fire: oxides of carbon, oxides of nitrogen, and isocyanates.

SECTION VI – ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Observe all personal protective equipment recommendations described in Sections 5 and 8.
ENVIRONMENTAL PRECAUTIONS: Disposal of collected product, residues, and cleanup materials may be governmentally regulated. Observe all applicable local, state and federal waste management regulations.
METHODS FOR CLEANING UP: Ventilate area. Extinguish all ignition sources. Contain spill. Evacuate unprotected personnel from hazard area. Cover with absorbent, place in approved drum; do not seal drum for 48 hours to avoid possible pressure build-up. Local, state, and federal reporting requirements may apply to spills or releases of this material into the environment. See applicable regulatory compliance information in Section 15.

SECTION VII – HANDLING AND STORAGE

HANDLING: Assure good ventilation

STORAGE: Eliminate sources of ignition. Store in original sealed containers away from heat and moisture. Shelf-life 12 months at 73°F and 50% relative humidity.

SECTION VIII – EXPOSURE CONTROL AND PERSONAL PROTECTION

ENGINEERING CONTROLS:

LOCAL EXHAUST: Recommended

GENERAL VENTILATION: Recommended

PERSONAL PROTECTIVE EQUIPMENT:

EYE PROTECTION: Avoid eye contact. Use proper protection - safety glasses as a minimum.

SKIN AND BODY PROTECTION: Avoid skin contact. Protect hands with impervious rubber gloves and wear typical full cover clothing. Gloves must be checked before each use for signs of degradation and penetration and for proper functioning. Wear appropriate gloves when handling this product.

RESPIRATORY PROTECTION: Avoid breathing of vapors. Wear appropriate, properly fitted NIOSH/MSHA approved respirator when the airborne contaminant levels exceed the exposure limits indicated on the MSDS. Follow respirator manufacturer's directions for respirator use. Industrial hygiene personnel can assist in judging the adequacy of existing engineering controls.

HYGIENE MEASURES (INGESTION): Wash hands after handling and before eating.

PRECAUTIONARY MEASURES: Avoid eye contact. Avoid skin contact. Avoid breathing vapor. Keep container closed. Do not take internally.

Note: These precautions are for room temperature handling. Use at elevated temperatures or aerosol spray applications may require added precautions.

SECTION IX – PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM: Solid (Paste)

COLOR: Various

ODOR: Slight odor of xylene

pH: Not Applicable

BOILING POINT (AT 760 MM HG): Not Applicable

FLASHPOINT: Greater than 65°C (150°F)

EXPLOSION PROPERTIES: Not Determined

VAPOR PRESSURE (AT 100°F): Not Applicable

VAPOR DENSITY: 3.66 (Xylene)
DENSITY: 10.7 lb/gal
SOLUBILITY IN WATER (%): NIL
SPECIFIC GRAVITY (AT 77°F/25°C): 1.28
VISCOSITY (AT 77°F/25°C): Greater than 700,000 cps (@ 2 rpm)
FREEZING / MELTING POINT: Not Applicable
ODOR THRESHOLD: Not Determined
EVAPORATION RATE: Not Applicable
% VOLATILE BY VOLUME: Less than 6%
VOLATILE ORGANIC CONTENT (VOC): 3.53% by weight; 45 g/L (0.38 lbs/gal)

NOTE: The above information is not intended for use in preparing product specifications.

SECTION X – STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable
HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur.
CONDITIONS TO AVOID: Exposure to air or moisture until ready to use. Store away from water or moisture as this will lead to premature curing of the material.
MATERIALS TO AVOID: Amines, alcohol, and water will react with this material. Water reacts with this material to form carbon dioxide, which could result in the buildup of pressure in a sealed container. But it is highly unlikely that enough water will mix-in to form enough carbon dioxide to present a hazardous situation. Avoid oxidizers.
INCOMPATIBILITY: Note that precipitated calcium carbonate will ignite on contact with fluorine. It is incompatible with acids, alum, ammonia salts, and mercury + hydrogen mixtures.
HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon and oxides of nitrogen, isocyanates. Also possible are oxides of sulfur, phenol, and hydrogen cyanide.

SECTION XI – TOXICOLOGICAL INFORMATION

May cause respiratory sensitization, eye and skin irritation. May cause allergic respiratory and/or allergic skin reaction. See Section 2 for exposure limits, Section 3 for exposure effects.

ACUTE TOXICITY:
FOR BUTYL BENZYL PHTHALATE: Inhalation TCLo – 789 mg/m^3/6hr (rat)
Oral LD50 – 2,330 mg/kg (rat)
Dermal LD50 – 6,700 mg/kg (rat)

FOR CALCIUM CARBONATE:	Oral LD50 – 7,340 mg/kg (rat)
FOR CALCIUM OXIDE:	Not established.
FOR TITANIUM DIOXIDE:	Inhalation TCLo – 250 mg/m^3/6hr (rat) Oral LD50 – >24,000 mg/kg (rat) Dermal LD50 – >10,000 mg/m^3 (rabbit)
FOR XYLENE:	Inhalation LC50 – 5,000 ppm/4hr (rat) Oral LD50 – 4,300 mg/kg (rat) Dermal LD50 – >1,700 mg/kg (rabbit)
FOR MDI:	Inhalation LC50 – 178 mg/m^3 (rat) Oral LD50 – 2,200 mg/kg (mouse)
FOR ETHYL BENZENE:	Oral LD50 – 3,500 mg/kg (rat) Dermal LD50 – 17,800 µL/kg (rabbit) Inhalation LCLo – 4,000 ppm/4hr (rat)
FOR SILICA, QUARTZ:	Implant TDLo – 900 mg/kg (rat) Inhalation TCLo – 300 µg/m^3 (human) Intravenous LDLo – 40 mg/kg (mouse)

CHRONIC TOXICITY:

SKIN: Repeat contact with skin may cause severe irritation, sensitization, or allergic reaction. Prolonged skin contact with xylene or ethyl benzene may cause skin irritation or dermatitis. Chronic exposure to calcium oxide may cause severe corrosive damage.

INHALATION: Vapor overexposure may cause drowsiness, irritate eyes, nose, and throat, or injure blood, liver, or central nervous system. Prolonged inhalation of dust (including calcium carbonate, titanium dioxide, and silica in dust form) may cause respiratory effects including shortness of breath, reduced pulmonary function, and pulmonary fibrosis (scarring of the lungs). Chronic exposure to BBP by inhalation may cause sleepiness, withdrawal and weight loss or decreased weight gain. Chronic exposure to xylene may cause damage to the eyes, central nervous system, bone marrow, liver, or kidneys. Chronic inhalation of calcium oxide may cause inflammation and ulcers in the respiratory system. Chronic overexposure to isocyanates (found in MDI) may cause lung damage and isocyanate sensitization (chemical asthma), which may be temporary or permanent. Chronic inhalation of ethyl benzene may have central nervous effects.

ORAL: Small amounts transferred to the mouth by fingers during use, etc. should not injure. Swallowing larger quantities may have adverse effects depending on

quantity ingested. Repeated ingestion of BBP may cause sleepiness, withdrawal, and weight loss or decreased weight gain. Ingestion of xylene may cause central nervous system effects.

SPECIFIC EFFECTS:

This material contains the following components with the special hazards listed below.

Carcinogens:	See below.
Teratogens:	Xylene and ethyl benzene may cause teratogenic effects. Titanium dioxide has caused teratogenic effects in laboratory animals.
Mutagens:	Positive and negative results have been observed "in vitro" for MDI and ethyl benzene. For ethyl benzene, mutation in mammalian somatic cells (Rodent, mouse) Lymphocyte = 80 mg/L.
Reproductive toxins:	BBP, xylene, and ethyl benzene may cause reproductive effects.

CARCINOGENICITY:

BUTYL BENZYL PHTHALATE: The IARC has evaluated this chemical and listed it as Group 3, not classifiable as to its carcinogenicity to humans.

TITANIUM DIOXIDE: The IARC has evaluated this chemical and listed it as Group 3, not classifiable as to its carcinogenicity to humans.

XYLENE: The IARC has evaluated this chemical and listed it as Group 3, not classifiable as to its carcinogenicity to humans.

MDI: The IARC has evaluated this chemical and listed it as Group 3, not classifiable as to its carcinogenicity to humans.

ETHYL BENZENE: The IARC has evaluated this chemical and listed it as Group 2B, possibly carcinogenic to humans.

SILICA, QUARTZ: The IARC has evaluated this chemical and listed it as Group 1, carcinogenic.

SECTION XII – ECOLOGICAL INFORMATION

FOR BUTYL BENZYL PTHALATE:

Environmental Fate: Biodegradability is 50 – 100% after 28 days.

Environmental Toxicity: LC50 (Pimephales promelas): 1.5-2.25 mg/L (96hr);
LC50 (Rainbow trout): 1.1 mg/L (96hr);
EC50 (Daphnia magna): 1.7 mg/L (48 hr);
EC50 (Green algae): 1.5 mg/L (72hr)

FOR CALCIUM CARBONATE:

Environmental Fate: This chemical is not expected to have a significant impact when released into the environment.

Environmental Toxicity: TLm (Mosquito Fish): 240 ppm/24hr; 220 ppm/48hr; 160 ppm/96hr at 70-73.5 degrees F (21-23 degrees C)

FOR CALCIUM OXIDE:

Environmental Fate: Not available.

Environmental Toxicity: This chemical is expected to be toxic to aquatic life.
TLm (Mosquito Fish): 240 ppm/24hr – toxic
TLm (Sunfish): 100 ppm/3hr – toxic
TLm (Vector snail): 300 ppm/24hr – lethal

FOR TITANIUM DIOXIDE:

Environmental Fate: Not available.

Environmental Toxicity: Not available.

FOR XYLENE:

Environmental Fate: When released into the soil, this material may evaporate to a moderate extent. When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material may biodegrade to a moderate extent. When released into water, this material may evaporate to a moderate extent. When released into water, this material may biodegrade to a moderate extent. When released into the air, this material may be moderately degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to have a half-life of less than 1 day. This material is not expected to significantly bioaccumulate. [Mixed xylenes: octanol / water partition coefficient 3.1 - 3.2; bioconcentration factor = 1.3 (eels).]

Environmental Toxicity: This material is expected to be slightly toxic to aquatic life.
LC50 – Range 10-100 mg/L/96hr (fish)

FOR MDI:

Environmental Fate: Aquatic: Rapidly hydrolyzes to form an insoluble crust.
Terrestrial: Will bind with moist soil. No leaching will occur.
Atmospheric: Remains in the vapor phase and is degraded by photochemically produced hydroxyl radicals (half-life is 32 hours).
Will not bioconcentrate or biodegrade.

Environmental Toxicity: This material may be toxic to some types of aquatic life.
LC50 – >500 mg/L/24hr static (Daphnia magna, Limnea Stagnalis, and Zebra fish).

FOR ETHYL BENZENE:

Environmental Fate: No information available.
Environmental Toxicity: This chemical is expected to be toxic to aquatic life.
Fish: Rainbow Trout: LC50 – 14.0 mg/L/96hr
Static Bioassay Fish: Fathead Minnow: LC50 – 12.1 mg/L/96hr
Flow-through Bioassay Fish: Bluegill/Sunfish: LC50 – 150.0 mg/L/96hr
Static Bioassay, pH 6.5-7.9, 21-23 degrees C,
Water flea: EC50 – 2.1 mg/L/48hr
Static Bioassay Water Flea: EC50 – 75.0 mg/L/48hr
Static Bioassay Shrimp (mysidoposis bahia): LC50 – 87.6 mg/L/96hr
Sheepshead Minnow: LC50 – 275mg/L/96hr
Fathead Minnow: LC50 – 42.3 mg/L/96hr in hard water, 48.5mg/L/96hr in soft water.

FOR SILICA, QUARTZ:
Environmental Fate: Not available.
Environmental Toxicity: Not available.

SECTION XIII – DISPOSAL INFORMATION

PRODUCT DISPOSAL: RCRA Hazard Class (40 CFR 261)
When a decision is made to discard this material, as received, is it classified as a hazardous waste? No
Federal Hazardous Waste Code: Not Applicable
Characteristic Waste: Ignitable: Not Applicable Corrosive: Not Applicable Reactive: Not Applicable TCLP: Not Applicable

WASTE FROM RESIDUES
CONTAMINATED PACKAGING: Residues of hazardous waste in empty containers should be managed according to 40 CFR 261.7

State or local laws may impose additional regulatory requirements regarding disposal.

SECTION XIV – TRANSPORT INFORMATION

DOT Information (49CFR 172.101)

PROPER SHIPPING NAME:	Not Applicable
HAZARD CLASS:	Not Applicable
UN / NA NUMBER:	None
PACKING GROUP:	Not Applicable
QUANTITY LIMITATIONS:	Not Applicable
VESSEL STORAGE REQUIREMENTS:	Not Applicable

SECTION XV – REGULATORY INFORMATION

US FEDERAL REGULATIONS:

Occupational Health and Safety Administration (OSHA)

Ingredients listed on National Toxicology Program (NTP) Annual Report on Carcinogens
The following ingredients are known to be human carcinogens.

- Silica, quartz (Silica, crystalline) 14808-60-7
- Vinyl chloride 75-01-4

The following ingredients are reasonably anticipated to be human carcinogens.

- Furan 110-00-9
- Propylene oxide 75-56-9
- Acetaldehyde 75-07-0

Ingredients listed on International Agency for Research on Cancer (IARC) Monographs
The following ingredient is listed as Group 1.
Group 1 is defined as: The agent (mixture) is carcinogenic to humans.

- Silica, quartz 14808-60-7
- Vinyl chloride 75-01-4

The following ingredients are listed as Group 2B.
Group 2B is defined as: The agent is possibly carcinogenic to humans.

- Ethyl benzene 100-41-4
- Furan 110-00-9
- Propylene oxide 75-56-9
- Acetaldehyde 75-07-0

The following ingredients are listed as Group 3.
Group 3 is defined as: The agent (mixture or exposure circumstances) is not classifiable as to its carcinogenicity to humans.

- Butyl benzyl phthalate 85-68-7
- Polyvinyl chloride (PVC) 9002-86-2
- Titanium dioxide 13463-67-7
- Xylene 1330-20-7
- Diphenylmethane diisocyanate (MDI) 101-68-8

Toxic Substance Control Act (TSCA)

TSCA Status: All chemical substances found in this product comply with the Toxic Substances Control Act inventory reporting requirements.

Superfund Amendments and Reauthorization Act (SARA) Title III

- **Section 302/304**
  These sections require emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) of “Extremely Hazardous Substances” (EHS) listed in Appendix A of 40 CFR 355.

Chemical	*CAS No.*	*Wt%*	*RQ (lbs)*	*TPQ (lbs)*
Furan	110-00-9	< 0.0006	100	500
Propylene oxide	75-56-9	< 0.0002	100	10,000

- **Section 311/312**
  These sections require Tier I/Tier II - Emergency and hazardous chemical inventory form. Minimum thresholds have been established for Tier One/Tier Two reporting under Title III, Section 312. These thresholds are as follows:

  For Extremely Hazardous Substances (EHSs) designated under Section 302 of Title III, the reporting threshold is 500 pounds (or 227 kg.) or the threshold planning quantity (TPQ), whichever is lower. For all other hazardous chemicals for which facilities are required to have or prepare an MSDS, the minimum reporting threshold is 10,000 pounds (or 4,540 kg.).

  Section 312 Hazard Class:
  Acute: Yes
  Chronic: No
  Fire: No
  Pressure: No
  Reactive: No

- **Section 313**
  This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right to Know Act:

Chemical	*CAS No.*	*Wt%*	*Threshold Reporting %*
Xylene	1330-20-7	1-5	1.0

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

Releases of CERCLA hazardous substances, in quantities equal to or greater than their reportable quantity (RQ), are subject to reporting to the National Response Center under CERCLA. Such releases are also subject to state and local regulations under Section 304 of SARA Title III (EPCRA). This material contains the following components and RQs on the CERCLA hazardous substance list.

Chemical	*CAS No.*	*Wt%*	*Reportable Quantity (RQ) in pounds*
Butyl benzyl phthalate	85-68-7	15-40	100
Xylene	1330-20-7	1-5	100
MDI	101-68-8	0.5-1.5	5,000
Ethyl benzene	100-41-4	0.1-1.0	1,000
Chlorobenzene	108-90-7	< 0.01	100
Vinyl chloride	75-01-4	< 0.002	1
Furan	110-00-9	< 0.0006	100
Propylene oxide	75-56-9	< 0.0002	100

Acetaldehyde	75-07-0	< 0.00005	1,000

US STATE REGULATIONS:

California
California Safe Drinking Water and Toxic Enforcement Act – Proposition 65

This product contains the following chemical currently listed under California Proposition 65.

Chemical	*CAS No.*	*Source List Designations*
Vinyl chloride	75-01-4	Cancer
Furan	110-00-9	Cancer
Propylene oxide	75-56-9	Cancer
Acetaldehyde	75-07-0	Cancer

Volatile Organic Content (VOC)

Wt%	*g/L*	*lbs/gal*
3.53	45	0.38

This product does comply with the California Air Resources Board maximum for VOCs in a sealant.

Per the California Air Resources Board TITLE 17 Division 3 Chapter 1 Subchapter 8.5 Article 2 §94508, a VOC is a substance with a vapor pressure greater than or equal to 0.1 mmHg at 20°C (68°F), or is a chemical compound with less than or equal to 12 carbon atoms if the vapor pressure is not known, or is a chemical compound with a boiling point less than or equal to 216°C (421°F).

State Right-to-Know Regulations
States within the US that have promulgated State Right-to-Know regulations with chemical listing requirements including the chemicals in this product are provided below.

Chemical	*CAS No.*	*Wt%*	*States*
Butyl benzyl phthalate	85-68-7	15-40	Delaware, Massachusetts, Michigan, New Jersey, New York, Pennsylvania
Polyvinyl chloride	9002-86-2	10-30	New Jersey
Precipitated calcium carbonate	471-34-1	5-10	Minnesota
Calcium carbonate	1317-65-3	3-7	Massachusetts, Minnesota, Pennsylvania, Washington
Calcium oxide	1305-78-8	1-5	Florida, Massachusetts, Minnesota, Pennsylvania, Washington
Titanium dioxide	13463-67-7	1-5	Massachusetts, Minnesota, New Jersey, Pennsylvania, Washington
Xylene	1330-20-7	1-5	Delaware, Florida, Massachusetts, Michigan, Minnesota, New Jersey, New York, Pennsylvania, Washington

MDI	101-68-8	0.5-1.5	Delaware, Florida, Massachusetts, Minnesota, New Jersey, New York, Pennsylvania, Washington
Ethyl benzene	100-41-4	0.1-1.0	Delaware, Florida, Massachusetts, Minnesota, New Jersey, New York, Pennsylvania, Washington
Silica, quartz	14808-60-7	< 0.1	Florida, Massachusetts, Minnesota, New Jersey, Pennsylvania, Washington
Toluenesulfonyl chloride	98-59-9	< 0.01	Minnesota
Chlorobenzene	108-90-7	< 0.01	Delaware, Florida, Massachusetts, Michigan, Minnesota, New Jersey, New York, Pennsylvania, Washington
Stannous 2-ethylhexanoate	301-10-0	< 0.003	Massachusetts
Vinyl chloride	75-01-4	< 0.002	Delaware, Florida, Massachusetts, Michigan, Minnesota, New Jersey, New York, Pennsylvania, Washington
Furan	110-00-9	< 0.0006	Delaware, Florida, Massachusetts, New Jersey, New York, Pennsylvania
Propylene oxide	75-56-9	< 0.0002	Delaware, Florida, Massachusetts, Minnesota, New Jersey, New York, Pennsylvania, Washington
Acetaldehyde	75-07-0	< 0.00005	Delaware, Florida, Massachusetts, Minnesota, New Jersey, New York, Pennsylvania, Washington

INTERNATIONAL:

Canada

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Canadian DSL

All ingredients in this product are currently listed on the Canadian Domestic Substances List (DSL) except the non-hazardous polyurethane prepolymer and dimorpholine ethane, which are both on the NDSL. (Based upon the concentration of the prepolymer in the formulation, it would require over 128,000 10.1 fl.oz. cartridges of Low VOC 25 to reach the 10,000 kg yearly limit for an NDSL polymer approved under Schedule VI before reporting is required. This is equal to approximately 49 200-Gal batches of Low VOC 25. There is also a cumulative limit of 50,000 kg that can take many years to reach, assuming no one year exceeds the 10,000 kg limit. The dimorpholine ethane is in such small quantities that it would require millions of cartridges to reach the yearly limit.) The substances that are on the DSL would not be considered new for the purposes of the Canadian Environmental Protection Act (CEPA).

Note:

The recipient of this product should be aware of the possible existence of additional local regulations, which may be applicable to this product.

SECTION XVI – OTHER INFORMATION

HMIS-III: Health –
0 = No significant health risk
1 = Irritation or minor reversible injury possible
2 = Temporary or minor injury possible
3 = Major injury possible unless prompt action is taken
4 = Life threatening, major or permanent damage possible

Flammability-
0 = Material will not burn
1 = Material must be preheated before ignition will occur
2 = Material must be exposed to high temperatures before ignition
3 = Material capable of ignition under normal temperatures
4 = Flammable gases or very volatile liquids; may ignite spontaneously

Physical Hazard-
0 = Material is normally stable, even under fire conditions
1 = Material normally stable but may become unstable at high temps
2 = Materials that are unstable and may undergo react at room temp
3 = Materials that may form explosive mixtures with water
4 = Materials that are readily capable of explosive water reaction

Abbreviations:

ACGIH	American Conference of Government Industrial Hygienists
CAS	Chemical Abstract Service
CERCLA	Comprehensive Environmental Response, Compensation & Liability Act
CFR	Code of Federal Regulations
CPR	Controlled Products Regulations (Canada)
DOT	Department of Transportation
IARC	International Agency for Research
MSHA	Mine Safety and Health Administration
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicity Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TWA	Time-weighted Average
WHMIS	Workplace Hazardous Material Information System

Revision #07-01, supersedes all previous revisions
Created: 11/30/2006
Last Updated: June 20, 2011

NOTE: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products.

QUIKRETE®
CEMENT & CONCRETE PRODUCTS™

RAPID SETTING REPAIR MATERIALS

MATERIAL SAFETY DATA SHEET
(Complies with OSHA 29 CFR 1910.1200)

SECTION I: PRODUCT IDENTIFICATION

The QUIKRETE® Companies
One Securities Centre
3490 Piedmont Road, Suite 1300
Atlanta, GA 30329

Emergency Telephone Number
(770) 216-9580

Information Telephone Number
(770) 216-9580

MSDS D4
Revision: May-12

QUIKRETE® Product Name	Product #
RAPID ROAD REPAIR	FIBERED 1242-50, UN-FIBERED 1242-52 EXTENDED 1242-80
RAPID HARDENING SAND MIX	1243-50
HYDRAULIC WATER STOP	1126-00
QUICK SETTING CEMENT	1240-00
EXTERIOR USE ANCHORING CEMENT	1245-80, -81
FASTSET™ WATER-STOP CEMENT	1126-00

PRODUCT USE: HYDRAULIC CEMENT-BASED RAPID-SETTING REPAIR MATERIALS

SECTION II - HAZARD IDENTIFICATION

Route(s) of Entry: Inhalation, Skin, Ingestion
Acute Exposure: Product becomes alkaline when exposed to moisture. Exposure can dry the skin, cause alkali burns and affect the mucous membranes. Dust can irritate the eyes and upper respiratory system. Toxic effects noted in animals include, for acute exposures, alveolar damage with pulmonary edema.
Chronic Exposure: Dust can cause inflammation of the lining tissue of the interior of the nose and inflammation of the cornea. Hypersensitive individuals may develop an allergic dermatitis.
Carcinogenicity: Since Portland cement and blended cements are manufactured from raw materials mined from the earth (limestone, marl, sand, shale, etc.) and process heat is provided by burning fossil fuels, trace, but detectable, amounts of naturally occurring, and possibly harmful, elements may be found during chemical analysis. Under ASTM standards, Portland cement may contain 0.75 % insoluble residue. A fraction of these residues may be free crystalline silica. Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs and

possibly cancer. There is evidence that exposure to respirable silica or the disease silicosis is associated with an increased incidence of Scleroderma, tuberculosis and kidney disorders.

Carcinogenicity Listings:	NTP:	Known carcinogen
	OSHA:	Not listed as a carcinogen
	IARC Monographs:	Group 1 Carcinogen
	California Proposition 65:	Known carcinogen

NTP: The National Toxicology Program, in its "Ninth Report on Carcinogens" (released May 15, 2000) concluded that "Respirable crystalline silica (RCS), primarily quartz dusts occurring in industrial and occupational settings, is *known to be a human carcinogen*, based on sufficient evidence of carcinogenicity from studies in humans indicating a causal relationship between exposure to RCS and increased lung cancer rates in workers exposed to crystalline silica dust (reviewed in IAC, 1997; Brown *et al*., 1997; Hind *et al*., 1997)

IARC: The International Agency for Research on Cancer ("IARC") concluded that there was "*sufficient evidence* in humans for the carcinogenicity of crystalline silica in the forms of quartz or cristobalite from occupational sources", and that there is "*sufficient evidence* in experimental animals for the carcinogenicity of quartz or cristobalite." The overall IARC evaluation was that "crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is *carcinogenic to humans (*Group 1)." The IARC evaluation noted that "carcinogenicity was not detected in all industrial circumstances or studies. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." For further information on the IARC evaluation, see IARC Monographs on the Evaluation of carcinogenic Risks to Humans, Volume 68, "Silica, Some Silicates." (1997)

Signs and Symptoms of Exposure: Symptoms of excessive exposure to the dust include shortness of breath and reduced pulmonary function. Excessive exposure to skin and eyes especially when mixed with water can cause caustic burns as severe as third degree.

Medical Conditions Generally Aggravated by Exposure: Individuals with sensitive skin and with pulmonary and/or respiratory disease, including, but not limited to, asthma and bronchitis, or subject to eye irritation, should be precluded from exposure. Exposure to crystalline silica or the disease silicosis is associated with increased incidence of scleroderma, Tuberculosis and possibly increased incidence of kidney lesions.

Chronic Exposure: Dust can cause inflammation of the lining tissue of the interior of the nose and inflammation of the cornea. Hypersensitive individuals may develop an allergic dermatitis. (May contain trace (<0.05 %) amounts of chromium salts or compounds including hexavalent chromium, or other metals found to be hazardous or toxic in some chemical forms. These metals are mostly present as trace substitutions within the principal minerals)

Medical Conditions Generally Aggravated by Exposure: Individuals with sensitive skin and with pulmonary and/or respiratory disease, including, but not limited to, asthma and bronchitis, or subject to eye irritation, should be precluded from exposure.

SECTION III - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components	CAS No.	PEL (OSHA) mg/M^3	TLV (ACGIH) mg/M^3
Silica Sand, crystalline	14808-60-7	$\frac{10}{\%SiO_2+2}$	0.05 (respirable)
Portland Cement	65997-15-1	5	5
May Contain one or more of the following ingredients:			
Amorphous Silica	07631-86-9	$\frac{80\ mg/M^3}{\%\ SiO_2}$	10
Calcium Sulfate	10101-41-4 or 13397-24-5	5	5
Lime	01305-62-0	5	5
Fly Ash	68131-74-8	5	5
Calcium Aluminate Cement	65997-16-2	5	5
Clay	01332-58-7	5	5
Pulverized Limestone	01317-65-3	5	5

Other Limits: National Institute for Occupational Safety and Health (NIOSH). Recommended standard maximum permissible concentration=0.05 mg/M^3 (respirable free silica) as determined by a full-shift sample up to 10-hour working day, 40-hour work week. See NIOSH Criteria for a Recommended Standard Occupational Exposure to Crystalline Silica

SECTION IV – First Aid Measures

Eyes: Immediately flush eye thoroughly with water. Continue flushing eye for at least 15 minutes, including under lids, to remove all particles. Call physician immediately.
Skin: Wash skin with cool water and pH-neutral soap or a mild detergent. Seek medical treatment if irritation or inflammation develops or persists. Seek immediate medical treatment in the event of burns.
Inhalation: Remove person to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. Seek medical help if coughing and other symptoms do not subside. Inhalations of large amounts of Portland cement require immediate medical attention.
Ingestion: Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately.

SECTION V - FIRE AND EXPLOSION HAZARD DATA

Flammability: Noncombustible and not explosive.
Auto-ignition Temperature: Not Applicable
Flash Points: Not Applicable

SECTION VI – ACCIDENTAL RELEASE MEASURES

If spilled, use dustless methods (vacuum) and place into covered container for disposal (if not contaminated or wet). Use adequate ventilation to keep exposure to airborne contaminants below the exposure limit.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND STORAGE

Do not allow water to contact the product until time of use. DO NOT BREATHE DUST. In dusty environments, the use of an OSHA, MSHA or NIOSH approved respirator and tight fitting goggles is recommended.

SECTION VIII – EXPOSURE CONTROL MEASURES

Engineering Controls: Local exhaust can be used, if necessary, to control airborne dust levels.

Personal Protection: The use of barrier creams or impervious gloves, boots and clothing to protect the skin from contact is recommended. Following work, workers should shower with soap and water. Precautions must be observed because burns occur with little warning -- little heat is sensed.

WARN EMPLOYEES AND/OR CUSTOMERS OF THE HAZARDS AND REQUIRED OSHA PRECAUTIONS ASSOCIATED WITH THE USE OF THIS PRODUCT.

Exposure Limits: Consult local authorities for acceptable exposure limits

SECTION IX - PHYSICAL/CHEMICAL CHARACTERISTICS

Appearance: Gray to gray-brown colored powder. Some products contain coarse aggregate.

Specific Gravity:	2.6 to 3.15	**Melting Point:**	>2700°F
Boiling Point:	>2700°F	**Vapor Pressure:**	Not Applicable
Vapor Density:	Not Applicable	**Evaporation Rate:**	Not Applicable
Solubility in Water:	Slight	**Odor:**	Not Applicable

SECTION X - REACTIVITY DATA

Stability: Stable.
Incompatibility (Materials to Avoid): Material when mixed with water will react with Aluminum and other alkali and alkaline earth elements liberating hydrogen gas.
Hazardous Decomposition or By-products: None
Hazardous Polymerization: Will Not Occur.
Condition to Avoid: Keep dry until used to preserve product utility.

SECTION XI – TOXICOLOGICAL INFORMATION

Routes of Entry: Inhalation, Ingestion
Toxicity to Animals:
LD50: Not Available
LC50: Not Available
Chronic Effects on Humans: Conditions aggravated by exposure include eye disease, skin disorders and Chronic Respiratory conditions.
Special Remarks on Toxicity: Not Available

SECTION XII – ECOLOGICAL INFORMATION

Ecotoxicity: Not Available
BOD5 and COD: Not Available
Products of Biodegradation: Not available
Toxicity of the Products of Biodegradation: Not available
Special Remarks on the Products of Biodegradation: Not available

SECTION XIII – DISPOSAL CONSIDERATIONS

Waste Disposal Method: The packaging and material may be land filled; however, material should be covered to minimize generation of airborne dust. This product is not classified as a hazardous waste under the authority of the RCRA (40CFR 261) or CERCLA (40CFR 117&302).

SECTION XIV – TRANSPORT INFORMATION

DOT/UN Shipping Name: Non-regulated
DOT Hazard Class: Non-regulated
Shipping Name: Non-regulated
Non-Hazardous under U.S. DOT and TDG Regulations

SECTION XV – OTHER REGULATORY INFORMATION

US OSHA 29CFR 1910.1200: Considered hazardous under this regulation and should be included in the employers hazard communication program
SARA (Title III) Sections 311 & 312: Qualifies as a hazardous substance with delayed health effects
SARA (Title III) Section 313: Not subject to reporting requirements
TSCA (May 1997): All components are on the TSCA inventory list
Federal Hazardous Substances Act: Is a hazardous substance subject to statues promulgated under the subject act
California Regulation: WARNING: This product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Canadian Environmental Protection Act: Not listed
WHMIS Classification: Considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations (Class D2A, E- Corrosive Material) and subject to the requirements of Health Canada's Workplace Hazardous Material Information (WHMIS). This product has been classified according to the hazard criteria of the Controlled Products Regulation (CPR). This document complies with the WHMIS requirements of the Hazardous Products Act (HPA) and the CPR.

SECTION XVI – OTHER INFORMATION

HMIS-III:

Health –
0 = No significant health risk
1 = Irritation or minor reversible injury possible
2 = Temporary or minor injury possible
3 = Major injury possible unless prompt action is taken
4 = Life threatening, major or permanent damage possible

Flammability-
0 = Material will not burn
1 = Material must be preheated before ignition will occur
2 = Material must be exposed to high temperatures before ignition
3 = Material capable of ignition under normal temperatures
4 = Flammable gases or very volatile liquids; may ignite spontaneously

Physical Hazard-
0 = Material is normally stable, even under fire conditions
1 = Material normally stable but may become unstable at high temps
2 = Materials that are unstable and may undergo react at room temp
3 = Materials that may form explosive mixtures with water
4 = Materials that are readily capable of explosive water reaction

Abbreviations:

ACGIH	American Conference of Government Industrial Hygienists
CAS	Chemical Abstract Service
CERCLA	Comprehensive Environmental Response, Compensation & Liability Act
CFR	Code of Federal Regulations
CPR	Controlled Products Regulations (Canada)
DOT	Department of Transportation
IARC	International Agency for Research
MSHA	Mine Safety and Health Administration
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicity Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TWA	Time-weighted Average
WHMIS	Workplace Hazardous Material Information System

Revision #07-01, supersedes all previous revisions.

Created: 10/25/2006
Last Updated: May 8, 2012

NOTE: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products.

CEMENT & CONCRETE PRODUCTS™

C1: Portland Cement Based Concrete Products

SAFETY DATA SHEET
(Complies with OSHA 29 CFR 1910.1200)

SECTION I: PRODUCT IDENTIFICATION

The QUIKRETE® Companies
One Securities Centre
3490 Piedmont Road, Suite 1300
Atlanta, GA 30305

Emergency Telephone Number
(770) 216-9580
Information Telephone Number
(770) 216-9580

SDS C1
Revision: Jan-16

QUIKRETE® Product Name	Item #(s)
Fence Post Mix	1005
Fiber-Reinforced Concrete Mix	1006
Crack Resistant Concrete Mix	1006-80
Pro-Finish Crack Resistant Concrete Mix	1006-68
QUIKRETE 5000 Concrete Mix	1007
QUIKRETE 6000 Concrete Mix	1007
Pro-Finish QUIKRETE 5000	1007-85
Lightweight Concrete Mix	1008
Basic Concrete Mix	1015
Maximum Yield Concrete Mix	1100-80
Concrete Mix	1101-10, -20, -40, -60, -80, -90
Green Concrete Mix	1101-63, -73
B-Crete	1101-81
Red-E-Crete Concrete mix	1101-91, -87; 1141-62, -63, -92, -93
Countertop Mix	1106-80
All-Star Concrete Mix	1121
Rip Rap	1129
Rip Rap Scrim	1134-80
Handicrete Concrete Mix	1141-59, -60, -80
RiteMix Concrete	1171-60
Fiber Reinforced Deck Mix	1251-80, -81
All-Star Crack Resistant Concrete Mix	1470-03
All-Star 5000 Concrete Mix	1470-01
Form & Pour Mortar	808100-65
FlowCrete 5000 (Mix 801)	8080026/NR80026

Product Use: Portland cement-based, aggregated products for general construction

SECTION II - HAZARD IDENTIFICATION

Hazard-determining components of labeling: Silica, Portland cement

2.1 Classification of the substance or mixture

Carcinogen – Category 1A
Skin Corrosion – Category 1B
Skin Sensitization – Category 1B
Specific Target Organ Toxicity Repeat Exposure – Category 1
Specific Target Organ Toxicity: Single Exposure – Category 3

2.2a Signal word DANGER!

2.2b Hazard Statements

May cause cancer through chronic inhalation
Causes severe skin burns and serious eye damage
May cause an allergic skin reaction
Causes damage to lungs through prolonged or repeated inhalation
May cause respiratory irritation

2.2c Pictograms

2.2d Precautionary statements

Do not handle until all safety precautions have been read and understood.
Wear impervious gloves, such as nitrile. Wear eye protection, and protective clothing.
Do not eat, drink or smoke when using this product.
Wash thoroughly after handling.
Use only in a well-ventilated area.
Do not breathe dust.

If swallowed: Rinse mouth. Do NOT induce vomiting.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If on skin (or hair): Remove immediately all contaminated clothing and wash before re-use. Rinse skin or hair with water.
If significant skin irritation or rash occurs: get medical advice or attention.

Immediately seek medical advice or attention if symptoms are significant or persist.

Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/containers in accordance with all regulations.

2.3 Additional Information
The Portland cement in this product can cause serious, potentially irreversible damage to skin, eye, respiratory and digestive tracts due to chemical (caustic) burns, including third degree burns. Burns from Portland cement may not cause immediate pain or discomfort. You cannot rely on pain to alert you to cement burns. Therefore precautions must be taken to prevent all contact with Portland cement. Cement burns can become worse even after contact has ended. If there is contact with this product, immediately remove all product from body and thoroughly rinse with water. If you experience or suspect a cement burn or inflammation you should immediately see a health care professional.

Skin burns and irritation may be caused by brief exposure, though often are caused by extended exposure of 15 minutes, an hour, or longer. Interaction of Portland cement with water or sweat releases a caustic solution which produces the burns or irritation. Any extended exposure should be treated as though a burn has occurred until determined otherwise.

Skin contact with Portland cement can also cause inflammation of the skin, referred to as dermatitis. Signs and symptoms of dermatitis can include itching, redness, swelling, blisters, scaling, and other changes in the normal condition of the skin. Signs and symptoms of burns include the above and whitening, yellowing, blackening, peeling or cracking of skin.

The Portland cement in this product may cause allergic contact dermatitis in sensitized individuals. This overreaction of the immune system can lead to severe inflammation. Sensitization may result from a single exposure to the low levels of Cr (VI) in Portland cement or repeated exposures over months or years. Sensitization is long lasting and, after sensitization, even very small quantities can trigger the dermatitis. Sensitization is uncommon. Individuals who experience skin problems, including seemingly minor ones, are advised to seek medical attention.

2.3a HNOC – Hazards not otherwise classified: Not applicable

2.3b Unknown Acute Toxicity: None
2.3C WHMIS Classification
Class D2B – Skin/Eye Irritant
Class D2A – Chronic Toxic Effects – Carcinogen
Class E – Corrosive Material

2.3d Label Elements According To WHMIS
Hazard Symbols

Signal Word
DANGER!

SECTION III - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components	CAS No.	% by Weight
Sand, Silica, Quartz	14808-60-7	60-100*
Portland Cement	65997 15 1	10-30*
Fly Ash	68131-74-8	5-10*

*The concentrations ranges are provided due to batch-to-batch variability.
None of the constituents of this material are of unknown toxicity.

SECTION IV – FIRST AID MEASURES

4.1 Description of the first-aid measures
General information:
After inhalation: Remove person to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. In case of unconsciousness, place patient stably in side position for transportation.
After skin contact: Wash skin with cool water and pH-neutral soap or a mild detergent. If significant skin irritation or rash occurs: get medical advice or attention.
After eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
After swallowing: Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms/effects, acute and delayed
Inhalation: May cause respiratory tract irritation. Causes damage to organs through prolonged or repeated inhalation. This product contains crystalline silica. Prolonged or repeated inhalation of respirable silica from this product can cause silicosis.

Skin contact: The Portland cement in this product can cause serious, potentially irreversible damage to skin, eye, respiratory and digestive tracts due to chemical (caustic) burns, including third degree burns. Burns from Portland cement may not cause immediate pain or discomfort. You cannot rely on pain to alert you to cement burns. Therefore precautions must be taken to prevent all contact with Portland cement. Cement burns can become worse even after contact has ended. If

there is contact with this product, immediately remove all product from body and thoroughly rinse with water. If you experience or suspect a cement burn or inflammation you should immediately see a health care professional.

Skin burns and irritation may be caused by brief exposure, though often are caused by extended exposure of 15 minutes, an hour, or longer. Interaction of Portland cement with water or sweat releases a caustic solution which produces the burns or irritation. Any extended exposure should be treated as though a burn has occurred until determined otherwise.

Skin contact with Portland cement can also cause inflammation of the skin, referred to as dermatitis. Signs and symptoms of dermatitis can include itching, redness, swelling, blisters, scaling, and other changes in the normal condition of the skin. Signs and symptoms of burns include the above and whitening, yellowing, blackening, peeling or cracking of skin.

The Portland cement in this product may cause allergic contact dermatitis in sensitized individuals. This overreaction of the immune system can lead to severe inflammation. Sensitization may result from a single exposure to the low levels of Cr (VI) in Portland cement or repeated exposures over months or years. Sensitization is long lasting and, after sensitization, even very small quantities can trigger the dermatitis. Sensitization is uncommon. Individuals who experience skin problems, including seemingly minor ones, are advised to seek medical attention.

Eye Contact: Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Ingestion: May be harmful if swallowed. Ingestion may cause discomfort and/or distress, nausea or vomiting.

4.3 Indication of immediate medical attention and special treatment needed:
Immediately seek medical advice or attention if symptoms are significant or persist.

SECTION V - FIRE FIGHTING MEASURES

5.1 Flammability of the Product: Non-flammable and non-combustible
5.2 Suitable extinguishing agents: Treat for surrounding material
5.3 Special hazards arising from the substance or mixture: None
5.3a Products of Combustion: None
5.3b Explosion Hazards in Presence of Various Substances: Non-explosive in presence of shocks

SECTION VI – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Wear personal protective equipment (See section VIII). Keep unprotected persons away.

6.2 Methods and material for containment and cleaning up:
Do not allow to enter sewers/ surface or ground water. Dispose of unwanted materials and containers properly in accordance with all regulations.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND STORAGE

7.1 Handling
Precautions for safe handling: Ensure good ventilation/exhaustion at the workplace. DO NOT BREATHE DUST. In dusty environments, the use of an OSHA, MSHA or NIOSH approved respirator and tight fitting goggles is recommended. Wear appropriate PPE (See section 8).Do not mix with other chemical products, except as indicated by the manufacturer. Do not get in eyes, on skin or clothing. Good housekeeping is important to prevent accumulation of dust.

7.2 Storage
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: Keep out of the reach of children. Keep container tightly closed and prevent exposure to humidity. Do not allow water to contact the product until time of use to preserve product utility.

SECTION VIII – EXPOSURE CONTROL MEASURES / PERSONAL PROTECTION

8.1 Components with limit values that require monitoring at the workplace:

Hazardous Components	CAS No.	PEL (OSHA) mg/M^3	TLV (ACGIH) mg/M^3
Silica Sand, crystalline	14808-60-7	0.1	0.025 (resp)
Portland Cement	65997-15-1	5 (resp) 15 (total)	10 (resp)
Fly Ash	68131-74-8	N/A	N/A

8.2 Exposure Controls
Use ventilation adequate to keep exposures below recommended exposure limits.

8.3 General protective and hygienic measures
Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

8.3a Personal protective equipment

Protection of hands:
Wear gloves of adequate length to offer appropriate skin protection from splashes. Nitrile, Butyl and PVC gloves have been found to offer adequate protection for incidental contact. Precautions must be observed because burns occur with little warning -- little heat is sensed.

Eye protection:
Wear approved eye protection (properly fitted dust- or splash-proof chemical safety glasses.

Respiratory protection:
A NIOSH-approved dust mask or filtering face piece is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. Respirators should be selected by and used under the direction of a trained health and safety professional, following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2).

SECTION IX - PHYSICAL/CHEMICAL CHARACTERISTICS

General Information

Appearance	Form: Granular Solid
	Color: Gray to gray-brown colored
	Odor: None
pH-value at 20°C (68 °F):	13 (10%)
Boiling point/Boiling range:	Not applicable
Flash point:	Not applicable
Auto igniting:	Product is not self-igniting
Vapor pressure at 21°C (70°F)	Not available
Density at 25°C (77 °F):	2.6 to 3.15
Solubility in / Miscibility with Water:	Insoluble
VOC content:	0 g/L VOC

SECTION X – STABILITY AND REACTIVITY

10.1 Reactivity
No dangerous reaction known under conditions of normal use.
10.2 Chemical stability
Stable under normal storage conditions. Keep in dry storage.
10.3 Possibility of hazardous reaction
No dangerous reaction known under conditions of normal use.
10.4 Thermal decomposition / conditions to be avoided

No decomposition if used according to specifications.

10.5 Incompatible materials

Contact of silica with powerful oxidizing agents such as fluorine, chlorine trifluoride, manganese trioxide, or oxygen difluoride may cause fires

10.6 Hazardous Decomposition or By-products

Silica will dissolve in Hydrofluoric Acid and produce a corrosive gas – silicon tetrafluoride.

SECTION XI – TOXICOLOGICAL INFORMATION

11.1 Exposure Routes: Skin contact, skin adsorption, eye contact, inhalation, or ingestion.

11.2 Symptoms related to physical/chemical/toxicological characteristics:

Inhalation: May cause respiratory tract irritation. Causes damage to organs through prolonged or repeated exposure. This product contains crystalline silica. Prolonged or repeated inhalation of respirable silica from this product can cause silicosis.

Skin contact: Causes skin irritation. Handling can cause dry skin, discomfort, irritation, and dermatitis. May cause sensitization by skin contact. Product becomes extremely alkaline when exposed to moisture, and can cause alkali burns and affect the mucous membranes.

Eye Contact: Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Ingestion: Harmful if swallowed. Ingestion may cause discomfort and/or distress, nausea or vomiting.

11.3 Delayed, immediate and chronic effects of short-term and long-term exposure

Short Term

Skin Corrosion/Irritation: Causes severe skin burns.
Serious Eye Damage/Irritation: Causes severe eye damage.
Respiratory Sensitization: Not available
Skin Sensitization: May cause an allergic skin reaction.
Specific Target Organ Toxicity-Single Exposure: (Category 3) May cause respiratory irritation.
Aspiration Hazard: Not available

Long Term

Carcinogenicity: May cause cancer through chronic inhalation.
Germ Cell Mutagenicity: Not available
Reproductive Toxicity: Not available
Specific Target Organ Toxicity- Repeated Exposure: (Category 1) Causes damage to lungs through prolonged/repeated exposure
Synergistic/Antagonistic Effects: Not available.

SECTION XII – ECOLOGICAL INFORMATION

12.1 Ecotoxicity
May cause long-term adverse effects to the aquatic environment. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Must not reach bodies of water or drainage ditch undiluted or un-neutralized

12.2 Persistence and degradability
No further relevant information available.

12.3 Bioaccumulative potential:
No further relevant information available.

12.4 Mobility in soil
No further relevant information available.

12.5 Other Adverse Effects
No further relevant information available.

SECTION XIII – DISPOSAL CONSIDERATIONS

13.1 Waste Disposal Method
The packaging and material may be land filled; however, material should be covered to minimize generation of airborne dust. This product is not classified as a hazardous waste under the authority of the RCRA (40CFR 261) or CERCLA (40CFR 117&302). Disposal must be made in accordance with local, state and federal regulations.

13.2 Other disposal considerations
Uncleaned packaging
Recommendation: Disposal must be made in accordance with local, state and federal regulations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

SECTION XIV – TRANSPORT INFORMATION

	DOT (U.S.)	TDG (Canada)
UN-Number	Not Regulated	Not Regulated
UN proper shipping name	Not Regulated	Not Regulated
Transport Hazard Class(es)	Not Regulated	Not Regulated
Packing Group (if applicable)	Not Regulated	Not Regulated

14.1 Environmental hazards:
Not Available

14.2 Transport in bulk according to Annex II of Marpol 73/78 and the IBC Code
Not available

14.3 Special precautions for user
Do not handle until all safety precautions have been read and understood.

SECTION XV – OTHER REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislations specific for the chemical

Canada
WHMIS Classification: Considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations and subject to the requirements of Health Canada's Workplace Hazardous Material Information (WHMIS). This document complies with the WHMIS requirements of the Hazardous Products Act (HPA) and the CPR.

15.2 US Federal Information

SARA 302/311/312/313 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302, 311, 312 or 313.
RCRA: Crystalline silica (quartz) is not classified as a hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR §261 et seq.
CERCLA: Crystalline silica (quartz) is not classified as a hazardous substance under regulations of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 40 CFR §302.
Emergency Planning and Community Right to Know Act (SARA Title III): Crystalline silica (quartz) is not an extremely hazardous substance under Section 302 and is not a toxic chemical subject to the requirements of Section 313.
FDA: Silica is included in the list of substances that may be included in coatings used in food contact surfaces, 21 CFR §175.300(b)(3)(xxvi).
NTP: Respirable crystalline silica, primarily quartz dusts occurring in industrial and occupational settings, is classified as Known to be a Human Carcinogen.
OSHA Carcinogen: Crystalline silica (quartz) is not listed.

15.3 State Right to Know Laws

California Prop. 65 Components

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

California Inhalation Reference Exposure Level (REL): California established a chronic REL of 3 µg for silica (crystalline, respirable). A chronic REL is an airborne level of a substance at or below which no adverse health effects are anticipated in individuals indefinitely exposed to the substance at that level.

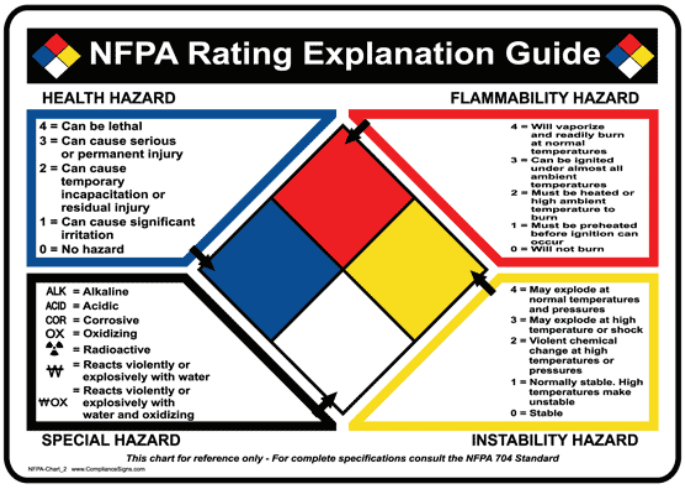
Massachusetts Toxic Use Reduction Act: Silica, crystalline (respirable size, <10 microns) is "toxic" for purposes of the Massachusetts Toxic Use Reduction Act.

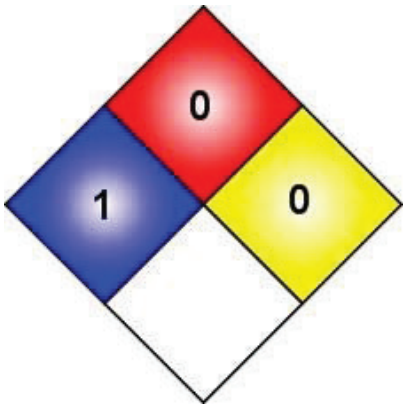
15.4 Global Inventories

DSL All components of this product are on the Canadian DSL list.

TSCA No.: Crystalline silica (quartz) appears on the EPA TSCA inventory under the CAS No. 14808-60-7. All constituents are listed in the TSCA inventory.

15.5 NFPA Ratings





SECTION XVI – OTHER INFORMATION

Last Updated: January 4, 2016

NOTE: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products.

Prepared by

The QUIKRETE® Companies
Phone (800) 282-5828
www.QUIKRETE.com

End of SDS

Material Safety Data Sheet: QUROX

Supercedes Date 07/21/2009 **Issuing Date** 01/16/2013

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name QUROX
Recommended use Solvent-borne coatings
Information on Manufacturer
CERTIFIED LABS, DIV. OF NCH CORP.
BOX 152170
IRVING, TEXAS 75015

Product Code 0638
Chemical nature Solvent blend
Emergency Telephone Number
CHEMTREC® 800-424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview
WARNING
Causes skin irritation
Causes eye irritation
May be harmful if inhaled
May be harmful if swallowed

Color Off-white - Light brown **Physical State** Liquid **Odor** solvent

Potential Health Effects

Principle Route of Exposure	Skin contact, Eye contact.
Primary Routes of Entry	Inhalation, Skin Absorption.
Acute Effects	
Eyes	Causes eye irritation.
Skin	Causes skin irritation. May be absorbed through the skin in harmful amounts.
Inhalation	Causes respiratory tract irritation. Inhalation may cause central nervous system effects. May cause central nervous system depression. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.
Ingestion	Ingestion may cause irritation to mucous membranes.
Chronic Toxicity	Liver and kidney injuries may occur.
Target Organ Effects	Central nervous system, Respiratory system, Liver, Kidney, Heart.
Aggravated Medical Conditions	Neurological disorders, Respiratory system, Liver disorders, Kidney disorders, Heart disease, Skin disorders.
Potential Environmental Effects	See Section 12 for additional Ecological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No
Vinyl acrylic polymer	25067-01-0
Tannic acid	1401-55-4
Silica, amorphous, precipitated and gel	112926-00-8
Dipropylene glycol mono methyl ether	34590-94-8

4. FIRST AID MEASURES

General advice	Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists.
Eye Contact	Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention if irritation develops and persists. Wash contaminated clothing before re-use.
Inhalation	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
Ingestion	Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention if symptoms occur.
Notes to physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point > 201 °F / > 94 °C **Method** Seta closed cup
Autoignition Temperature No information available.
Flammability Limits in Air % No information available. **Upper** No data available **Lower** No data available
Suitable Extinguishing Media
Foam. Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemical. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards arising from the chemical
Material can create slippery conditions. Dried polymer films are capable of burning.
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA	**Health** 2	**Flammability** 1	**Instability** 0
HMIS	**Health** 2	**Flammability** 1	**Instability** 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Ensure adequate ventilation. Prevent further leakage or spillage if safe to do so.
Environmental Precautions Do not flush into surface water or sanitary sewer system.
Methods for Containment Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13)
Methods for Cleaning Up Pick up and transfer to properly labeled containers
Neutralizing Agent Not applicable.

7. HANDLING AND STORAGE

Handling Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists.
Storage Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.
Storage Temperature **Minimum** 35 °F / 2 °C **Maximum** 120 °F / 49 °C
Storage Conditions **Indoor** X **Outdoor** **Heated** **Refrigerated**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Vinyl acrylic polymer	No data available	No data available	No data available
Tannic acid	No data available	No data available	No data available
Silica, amorphous, precipitated and gel	3 mg/m^3 PNOS	5 mg/m^3 PNOR	No data available
Dipropylene glycol mono methyl ether	TWA: 100 ppm Skin STEL: 150 ppm	TWA: 100 ppm TWA: 600 mg/m^3 Skin	IDLH: 600 ppm STEL 150 ppm STEL 900 mg/m^3 TWA: 100 ppm TWA: 600 mg/m^3

Engineering Measures Ensure adequate ventilation, especially in confined areas.
Personal Protective Equipment
- **Eye/Face Protection** Safety glasses with side-shields.
- **Skin Protection** Wear suitable protective clothing, Impervious gloves.
- **Respiratory Protection** In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

General Hygiene Considerations Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	**Viscosity**	Semi-viscous
Color	Off-white - Light brown	**Odor**	solvent
Appearance	Textured black paste	**pH**	1.3
Specific Gravity	1.229	**Bulk Density (lb/cu ft)**	10.25
Evaporation Rate	1.07 (Butyl acetate=1)	**Percent Volatile (Volume)**	62.2
VOC Content (%)	1.5	**VOC Content (g/L)**	18
Vapor Pressure	13.95 mmHg @ 70°F	**Vapor Density**	1.1
Solubility	Soluble	**Boiling Point/Range**	180 °F / 82 °C

10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal conditions
Conditions to Avoid None known
Incompatible Products Strong oxidizing agents, Reducing agents, Bases, Hydrogen fluoride.
Hazardous Decomposition Products Carbon oxides, Nitrogen oxides (NOx), Ammonia, Chlorine, Hydrogen chloride gas, Carbonyl halides.
Possibility of Hazardous Reactions None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information No information available.

Component Information

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Vinyl acrylic polymer	no data available	no data available	no data available	no data available	no data available
Tannic acid	= 2260 mg/kg (Rat)	no data available	no data available	no data available	no data available
Silica, amorphous, precipitated and gel	no data available	no data available	no data available	no data available	no data available
Dipropylene glycol mono methyl ether	= 5230 mg/kg (Rat)	= 9500 mg/kg (Rabbit)	no data available	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Vinyl acrylic polymer	no data available	no data available	no data available	no data available	no data available
Tannic acid	no data available	no data available	no data available	no data available	liver, kidney
Silica, amorphous, precipitated and gel	no data available	no data available	no data available	no data available	no data available
Dipropylene glycol mono methyl ether	no data available	no data available	no data available	no data available	eyes, CNS, respiratory system, heart, liver, lung

Carcinogenicity There are no known carcinogenic chemicals in this product.

Component	ACGIH	IARC	NTP	OSHA	Other
Vinyl acrylic polymer	not applicable	not applicable	not applicable	not applicable	not applicable
Tannic acid	not applicable	not applicable	not applicable	not applicable	not applicable
Silica, amorphous, precipitated and gel	not applicable	not applicable	not applicable	not applicable	not applicable
Dipropylene glycol mono methyl ether	not applicable	not applicable	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information No information available.

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Vinyl acrylic polymer	no data available	no data available	no data available	no data available	N/A
Tannic acid	no data available	LC50 = 37 mg/L Gambusia affinis 96 h	no data available	no data available	N/A
Silica, amorphous, precipitated and gel	no data available	no data available	no data available	no data available	N/A
Dipropylene glycol mono methyl ether	no data available	LC50 > 10000 mg/L Pimephales promelas 96 h	no data available	LC50= 1919 mg/L 48 h	-0.064

Persistence and Degradability No information available.
Bioaccumulation No information available.
Mobility No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal Dispose of in accordance with local regulations.
Container Disposal Empty containers should be taken for local recycling, recovery, or waste disposal.

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

ICAO Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

Inventories

TSCA	Complies
DSL	Complies

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and and Title 40 of the Code of Federal Regulations, Part 372.

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Dipropylene glycol mono methyl ether	34590-94-8	1-5	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	No	No	No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Vinyl acrylic polymer	Not applicable	Not applicable
Tannic acid	Not applicable	Not applicable
Silica, amorphous, precipitated and gel	Not applicable	Not applicable
Dipropylene glycol mono methyl ether	Not applicable	Not applicable

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

D2B Toxic materials

16. OTHER INFORMATION

Prepared By	Rachael Mohochi
Supercedes Date	07/21/2009
Issuing Date	01/16/2013
Reason for Revision	No information available.
Glossary	No information available.
List of References.	No information available.

CERTIFIED LABS, DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage or disposal of the product. The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

Safety Data Sheet

Revision Date: 05/28/2015

SECTION 1: Identification and Company Details

Product Name: 6300 Superior Pressure Sensitive Adhesive
Product Code: R6300

Manufacturer/ Supplier: Roberts Consolidated Industries, Inc.
Address: 300 Cross Plains Blvd.
Dalton, GA 30721

Emergency Phone: (800) 424-9300 (24-hour Response / CHEMTREC)
Product Information: (706) 277-5294

Recommended Use: Adhesive

SECTION 2: Hazard(s) Identification

Classification of the substance or mixture: This product is not classified as hazardous under GHS criteria.

SECTION 3: Composition / Information on Ingredients

	Weight %	CAS #
Distillates, petroleum, hydrotreated middle	1%	64742-46-7

SECTION 4: First-Aid Measures

Inhalation: Move victim to fresh air. Consult physician if necessary.
Skin Contact: Wash with soap and water. Remove contaminated clothing. Consult physician if necessary.
Eye Contact: Flush with copious amounts of water for at least 15 minutes. Consult physician if necessary.
Ingestion: Do not induce vomiting. Wash mouth with water. Consult physician.
Note to Physician: *Eyes:* Stain for evidence of corneal injury. If cornea is burned, instill antibiotic steroid preparation. *Skin:* Treat symptomatically as for contact dermatitis or thermal burns. If burned, treat as thermal burn. *Ingestion:* Treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated because of the irritating nature of this compound. *Respiratory:* Treatment is essentially symptomatic. Remove individual with symptoms from exposure and assist in breathing if necessary.

SECTION 5: Fire-Fighting Measures

Extinguishing Media: This product is not flammable. Use fire- extinguishing media appropriate for surrounding materials.
Hazardous Combustion Products: No particular hazards known.
Protection of Firefighters: Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

SECTION 6: Accidental Release Measures

Personal Precautions: Use protective gloves, goggles and suitable protective clothing.
Environmental Precautions: Do not allow product to get into drains, soil, or surface water.
Methods of Clean-up: Small spillages: Absorb with sand or other inert absorbent. Large spillages: Dam and absorb. Collect spillage in containers, seal securely and deliver for disposal according to local regulations. Wear necessary protective equipment.

SECTION 7: Handling and Storage

Handling Precautions: Provide good ventilation. Do not use in confined spaces without adequate ventilation and/or respirator. Avoid contact with skin and eyes. Do not eat, drink or smoke when using the product.

Storage: Keep separate from food, feedstuffs, fertilizers and other sensitive material. Store in closed original container at temperatures between 5°Cand 30°C/ 40°F and 86°F. Protect from freezing and direct sunlight.

SECTION 8: Exposure Control / Personal Protection

Exposure Guidelines: Not determined

Engineering Controls: Provide adequate ventilation.

Personal Protective Equipment:

Skin Protection - Permeation resistant gloves (butyl rubber, nitrile rubber, PVC or polyvinyl alcohol).

Eye/Face Protection - Glasses with side shields, chemical splash goggles and/or face shield.

Chemical Name / CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
Distillates, petroleum, Hydrotreated middle/ 64742-46-7	Not established	Not Established	Not Established

SECTION 9: Physical and Chemical Properties

Appearance: Off white paste
Vapor Density: Not Determined
Odor: Very mild acryllic/ resinous odor
Relative Density: 1.03
Odor Threshold: Not available
Solubility(ies): Not available
pH: 8.3
Partition Coefficient: n-octanol/water; Not determined
Melting Point: Not determined
Freezing Point: Not determined
Auto-ignition Temperature: Not determined
Flash Point: Non- flammable > 204 C (400 F) Cleveland Closed Cup
Decomposition Temperature: Not determined
Evaporation Rate: Not determined
Viscosity: Not determined
Flammability (Solid/Gas): Not applicable
Upper/Lower Flammability: Not determined
VOC Content: <1 g/L
Vapor Pressure: Not Determined
Boiling Point: 100°C/ 212°F

SECTION 10: Stability and Reactivity

Chemical Stability: Stable under normal temperature conditions and recommended use.
Conditions to Avoid: Excessive heat, direct sunlight and/or frost.
Materials to Avoid: Water, amines, strong bases, and alcohols.

SECTION 11: Toxicological Information

Acute toxicity:
Ingestion: Not determined
Inhalation: Not determined
Skin Contact: Not determined.

	CAS Number	%Weight
Distillates, petroleum, hydrotreated middle	64742-46-7	1%

SECTION 12: Ecological Information

Mobility and Bioaccumulation Potential: Not determined
Degradation: Not determined
Aquatic Toxicity: Not determined
LC50 – 24 hour (Static): Not determined

SECTION 13: Disposal Considerations

Disposal: Dispose of waste and residues in accordance with local authority requirements. Incineration is the preferred method of disposal.
Wastes or Residues: Same as above.

SECTION 14: Transport Information

Road:
DOT Proper Shipping Name: Non-Regulated
DOT Packing Group: N/A
DOT Label: N/A
UN Number: N/A

Ocean:
Proper Shipping Name: Non-Regulated
Sea – IMO/IMDG Class: N/A
UN Number: N/A
Label: N/A
Packing Group: N/A
Marine Pollutant: N/A
EMS: N/A

Air:
Proper Shipping Name: Non-Regulated
Air – ICAO/IATA Class: N/A
UN Number: N/A
Label: N/A
Sub Class: N/A
Packing Group: N/A
Pack Instr. Passenger: N/A
Pack Instr. Cargo: N/A

SECTION 15: Regulatory Information

Status on Substance Lists: The concentrations shown in this document are maximum levels (weight %) to be used for regulations.

TSCA: The components of this product are contained on the chemical substance inventory list
IARC: Not carcinogenic
OSHA PEL's None

Federal EPA: Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA): Requires notification of the national response center of release of quantities of hazardous substances equal to or greater than the reportable quantities (RQ's) in 40 CFR 302.4. Components present in this product at level which could require reporting under the statute are:

Chemical Name	CAS Number	% by Weight	RQ
None	None	None	None

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III: Sections 301-304 require emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQ) in 40 CFR 355. Components present in this product at level which could require reporting under this statue are:

Chemical Name	CAS Number	% by Weight	RQ
None	None	None	None

Section 311-312 require products be reviewed and applicable EPA Hazard Definitions be identified and made known- None

NJ RTK
None

Pennsylvania RTK
None

SARA 302 Extremely Hazardous Substances
- None

Massachusetts RTK
None

EPA Hazard Classifications:

Acute Hazard	Chronic Hazard	Fire Hazard	Pressure Hazard	Reactive Hazard
No	No	No	No	No

Section 313 requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all SDSs that are distributed for this material. Components present in this product at level which could require reporting under the statute are: None

Canada DSL: All components are on the DSL list or exempt.

California Proposition 65: Does not contain any listed chemical to the best of our knowledge.

SECTION 16: Other Information

This Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200).

HMIS RATING: HEALTH-1, FLAMMABILITY-0, REACTIVITY-0, PERSONAL PROTECTION- B.

Prepared by: Roberts Consolidated Product Safety & Regulatory Compliance Group, (706) 277-5294

The information herein is given in good faith, but no warranty expressed or implied is made. Roberts Consolidated urges users of this product to evaluate its suitability and compliance with local regulations as Roberts Consolidated cannot foresee the final use of the product, nor the final location of usage.

Date of issue: 5/28/15

==========**I. PRODUCT IDENTIFICATION**==========

Trade Name: Roberts R7275 Superior Commercial Wall Base Adhesive

Chemical names, common names: Acrylic Polymer Blend

Manufacturer's Name: Roberts Consolidated Industries, Inc.
Address: 300 Cross Plains Blvd.
Dalton, GA 30721

Emergency Phone: 706/277-5294
Business Phone: 706/277-5294

Date prepared: 09/22/2010
By: M. King

HMIS Rating: H = 1 F = 0 R = 0

==========**II. HAZARDOUS INGREDIENTS**==========

Ingredients	CAS No.	% by wt.	PEL	TLV

None

Reportable hazardous chemicals for SARA TITLE III Section 311, 312, 313:

None

==========**III. PHYSICAL PROPERTIES** ==========

Vapor Density (Air=1): Greater than 1
Solubility in Water: Miscible
Vapor Pressure (mmHg at 20c): Same as water
Evaporation rate (nBuAc=1): Same as water

Boiling Point: 212F
Specific gravity: 1.38
pH: 9.7– 10.1

Appearance & odor: Off white mastic with a mild, sweet arcylic odor.

Percent Volatile: By weight: 35% By volume: 48%

VOC calculated: 0 g/l

==========**IV. FIRE AND EXPLOSION**==========

Flash point, Pensky-Martens C.C: NA
Auto-Ignition Temperature, F: NA
Flammable limits in air, Volume %: Lower: Not Applicable Upper: NA
Fire Extinguishing Materials:

__X__Water Spray __X__Carbon Dioxide _____Other:

__X__Foam __X__Dry Chemical

Special Fire fighting Procedures: Wear self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: None known

==========

========== V. HEALTH HAZARD INFORMATION ==========

SYMPTOMS OF OVEREXPOSURE

Inhalation: May cause slight irritation to upper respiratory tract.

Eyes: May cause slight irritation.

Skin: None known; may cause slight irritation.

Ingestion: Not a likely route of entry under proper handling conditions. May cause vomiting. Symptoms may be the same as inhalation.

HEALTH EFFECTS OR RISKS FROM EXPOSURE

Acute: May cause mild skin irritation, irritation of respiratory tract.

Chronic: None known.

FIRST AID: EMERGENCY PROCEDURES

Eye contact: Flush with water for at least 15 minutes. If irritation persists, seek medical attention.

Skin contact: Wash with soap and water. If irritation persists, see a physician.

Inhalation: Remove to fresh air, administer oxygen and if necessary, seek medical attention.

Ingestion: Not a likely route of entry under proper handling conditions. Seek medical attention if necessary.

SUSPECTED CANCER AGENT?

NO: _X__

YES: _____ Federal OSHA _____NTP _____IARC _____Cal/OSHA

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None Known

==========**VI. REACTIVITY DATA**==========

Stability: __X____ Stable _____ Unstable

Conditions to Avoid: Protect from freezing.

Incompatibility (Materials to Avoid): Oxidizing materials

Hazardous Decomposition Products (including combustion products): Oxides of carbon, water and organic compounds of unknown structure.

Hazardous Polymerization: Does not occur

Conditions to Avoid: None known.

Corrosive to Metal: No Oxidizer: No

==========**VII. SPECIAL HANDLING INFORMATION**==========

Ventilation and Engineering Controls: Use local exhaust. Do not use closed air circulating system. Open windows and doors, if necessary.

Respiratory Protection: Normally none required. Use product in a well ventilated area. Use NIOSH approved respirator if irritation to respiratory tract. If vapors or mists are generated, wear NIOSH/MSHA approved organic vapor/mist respirator.

Eye Protection: Chemical goggles or face shield. Gloves: Chemical resistant gloves.

Other clothing and Equipment: If clothing becomes contaminated, remove and clean before re-wearing.

Work Practices, Hygienic Practices: Follow all label instructions.

Protective Measures During Maintenance of Contaminated Equipment:

Use goggles and gloves when cleaning adhesive from equipment. Maintain proper ventilation.

==========**VIII. SPILL, LEAK, AND DISPOSAL PROCEDURES**==========

Keep out of sewer systems to prevent blockage due to polymer deposits. Soak up material with absorbent material (sand, sawdust) and place into closed containers for disposal.
Note: Dispose of all wastes in accordance with Federal, State and Local regulations.

==========**IX. Storage & Handling DATA**==========

Other Handling and Storage requirements: Protect against physical damage. Store in a cool, dry place (50F - 90F). Keep away from excessive heat. Protect from freezing.

==========**X. Regulatory Information** ==========

Hazardous Waste 40CFR261: NO Hazardous Waste Number:

Hazardous Substance Superfund: NO RQ(lbs):

All components are in TSCA inventory.

==========**XI.SHIPPING DATA**==========

D.O.T. Proper Shipping Name (49CFR172.101-102): Adhesives.

Hazardous Substance (49CFR CERCLA list): No. RQ:

D.O.T. Hazard Classification (49CFR 172.101-102):
Primary: None Secondary: None.

D.O.T. Labels Required (49CFR172.101-102): None.

D.O.T. Placards Required (CFR172.504): None.

Poison Constituent (49CFR172.203(K)): None.

Bill of Lading Description: Adhesive, NOS

UN/NA Code: N/A

Roberts Capitol, Inc believes the data set forth herein are accurate as of the date hereof, and makes no warranty with respect thereto and expressly disclaims all liability for reliance thereon. Such data are offered solely for your consideration, investigation and verification.

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200

RAID® ANT & ROACH KILLER 17 (FRAGRANCE FREE)

Version *1*.1 Print Date 03/04/2015

Revision Date 02/24/2015 SDS Number 350000017506

1. PRODUCT AND COMPANY IDENTIFICATION

Product information

Product name : **RAID® ANT & ROACH KILLER 17 (FRAGRANCE FREE)**

Recommended use : Insecticide

Manufacturer, importer, supplier : S.C. Johnson & Son, Inc.
1525 Howe Street
Racine WI 53403-2236

Telephone : +18005585252
Emergency telephone number : 24 Hour Medical Emergency Phone: (866)231-5406
24 Hour International Emergency Phone: (703)527-3887
24 Hour Transport Emergency Phone: (800)424-9300

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

Globally Harmonized System (GHS) Classification

Hazard classification	Hazard category	Hazards identification
Aerosol	Category 2	Flammable aerosol.
Gases under pressure	Liquefied gas	Contains gas under pressure; may explode if heated.

Labelling
Hazard symbols
Flame
Gas cylinder

Signal word
Warning

Hazard statements
Flammable aerosol.
Contains gas under pressure; may explode if heated.

Precautionary statements
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.
Protect from sunlight. Store in a well-ventilated place.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Do not spray on an open flame or other ignition source.
Do not pierce or burn, even after use.

Other hazards : None identified

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Weight percent
Hydrocarbons, C14-C18, n-alkanes, isoalkanes, cyclics, <2% aromatics	64742-47-8	10.00 - 30.00
Propane	74-98-6	5.00 - 10.00
Butane	106-97-8	1.00 - 5.00
Isobutane	75-28-5	1.00 - 5.00
Isopropanol	67-63-0	1.00 - 5.00
Imiprothrin	72963-72-5	0.10 - 1.00
Cypermethrin	52315-07-8	0.0001 - 0.10

The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

For additional information on product ingredients, see www.whatsinsidescjohnson.com.

4. FIRST AID MEASURES

Eye contact : No special requirements

Skin contact : No special requirements

Inhalation : No special requirements.

Ingestion : No special requirements

5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Specific hazards during firefighting : Aerosol Product - Containers may rocket or explode in heat of fire. Do not allow run-off from fire fighting to enter drains or water courses.

Further information : Fight fire from maximum distance or protected area. Cool and use caution when approaching or handling fire-exposed containers. Wear full protective clothing and positive pressure self-contained breathing apparatus. In case of fire and/or explosion do not breathe fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Remove all sources of ignition.
Wear personal protective equipment.
Wash thoroughly after handling.

Environmental precautions : Do not flush into surface water or sanitary sewer system.
Use appropriate containment to avoid environmental contamination.
Outside of normal use, avoid release to the environment.

Methods and materials for containment and cleaning up : If damage occurs to aerosol can:
Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).
Use only non-sparking equipment.
Dike large spills.
Clean residue from spill site.

7. HANDLING AND STORAGE

Handling

Precautions for safe handling : Avoid contact with skin, eyes and clothing.
Do not enter places where used or stored until adequately ventilated.
For personal protection see section 8.
Use only as directed.
KEEP OUT OF REACH OF CHILDREN AND PETS.
Pressurized container.
Do not pierce or burn, even after use.

Advice on protection against fire and explosion : Keep away from sources of ignition - No smoking.
Do not spray on an open flame or other ignition source.

Storage

Requirements for storage areas and containers : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.
Keep away from food, drink and animal feedingstuffs.
Keep in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Components	CAS-No.	mg/m3	ppm	Non-standard units	Basis
Hydrocarbons, C14-C18, n-alkanes, isoalkanes, cyclics, <2% aromatics	64742-47-8	1,200 mg/m3	152 ppm	-	SUPPLIER
Propane	74-98-6	-	1,000 ppm	-	ACGIH TWA
Propane	74-98-6	1,800 mg/m3	1,000 ppm	-	OSHA TWA
Butane	106-97-8	-	1,000 ppm	-	ACGIH STEL
Isobutane	75-28-5	-	1,000 ppm	-	ACGIH STEL
Isopropanol	67-63-0	980 mg/m3	400 ppm	-	OSHA TWA
Isopropanol	67-63-0	-	400 ppm	-	ACGIH STEL
Isopropanol	67-63-0	-	200 ppm	-	ACGIH TWA

Personal protective equipment

Respiratory protection : Do not spray in enclosed areas.

Hand protection : No special requirements.

Eye protection	:	No special requirements.
Skin and body protection	:	No special requirements.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	:	aerosol
Form	:	Compressed gas
Color	:	clear
Odor	:	characteristic
Odour Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	-7 °C 19.4 °F
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper/lower flammability or explosive limits	:	No data available

Vapour pressure	:	No data available
Vapour density	:	No data available
Relative density	:	0.877 g/cm3 at 70 °F
Solubility(ies)	:	partly soluble
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	
Decomposition temperature	:	
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Oxidizing properties	:	No data available
Volatile Organic Compounds Total VOC (wt. %)*	:	12 % - additional exemptions may apply *as defined by US Federal and State Consumer Product Regulations
Other information	:	None identified

:

10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	:	Stable under recommended storage conditions.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Strong oxidizing agents

Hazardous decomposition products : Thermal decomposition can lead to release of irritating gases and vapours.

11. TOXICOLOGICAL INFORMATION

Emergency Overview : Warning

Acute oral toxicity : NA GHS LD50
estimated
> 5,000 mg/kg

Acute inhalation toxicity : NA GHS LC50 (dust and mist)
estimated
> 5.1 mg/l

Acute dermal toxicity : NA GHS LD50
estimated
> 5,000 mg/kg

GHS Properties	Classification	Routes of entry
Acute toxicity	No classification proposed	-
Skin corrosion/irritation	No classification proposed	-
Serious eye damage/eye irritation	No classification proposed	-
Skin sensitisation	No classification proposed	-
Respiratory sensitisation	No classification proposed	-
Germ cell mutagenicity	No classification proposed	-
Carcinogenicity	No classification proposed	-
Reproductive toxicity	No classification proposed	-
Specific target organ toxicity - single exposure	No classification proposed	-
Specific target organ	No classification proposed	-

toxicity - repeated exposure		
Aspiration hazard	No classification proposed	-

Aggravated Medical Condition : None known.

12. ECOLOGICAL INFORMATION

Product : The product itself has not been tested.

Toxicity
The ingredients in this formula have been reviewed and no adverse impact to the environment is expected when used according to label directions.

Toxicity to fish

Components	End point	Species	Value	Exposure time
Hydrocarbons, C14-C18, n-alkanes, isoalkanes, cyclics, <2% aromatics	LC50	Fish	> 1,028 mg/l	96 h
Propane	LC50	Fish	27.98 mg/l	96 h
Butane	No data available			
Isobutane	LC50	Fish	27.98 mg/l	96 h
Isopropanol	LC50	Pimephales promelas (fathead minnow)	9,640 mg/l	96 h
Imiprothrin	LC50	Oncorhynchus mykiss (rainbow trout)	0.038 mg/l	96 h

Cypermethrin	LC50	Oncorhynchus mykiss (rainbow trout)	0.00283 mg/l	96 h
	NOEC	Pimephales promelas (fathead minnow)	0.00001 mg/l	28 d

Toxicity to aquatic invertebrates

Components	End point	Species	Value	Exposure time
Hydrocarbons, C14-C18, n-alkanes, isoalkanes, cyclics, <2% aromatics	EC50 No data available		> 3,193 mg/l	48 h
Propane	LC50	Daphnid	14.22 mg/l	48 h
Butane	No data available			
Isobutane	LC50	Daphnid	16.33 mg/l	48 h
Isopropanol	EC50	Daphnia magna (Water flea)	13,299 mg/l	48 h
Imiprothrin	EC50	Daphnia magna (Water flea)	0.051 mg/l	48 h
Cypermethrin	EC50	Daphnia magna (Water flea)	0.00471 mg/l	48 h

	NOEC	Daphnia magna (Water flea)	0.00004 mg/l	21 d

Toxicity to aquatic plants

Components	End point	Species	Value	Exposure time
Hydrocarbons, C14-C18, n-alkanes, isoalkanes, cyclics, <2% aromatics	EC50	Skeletonema costatum	3,198 mg/l	72 h
Propane	No data available			
Butane	No data available			
Isobutane	EC50	Green algea	8.57 mg/l	96 h
Isopropanol	EC50	Desmodesmus subspicatus (green algae)	> 1,000 mg/l	72 h
Imiprothrin	NOEC	Pseudokirchneriella subcapitata (green algae)	1.3 mg/l	72 h
Cypermethrin	ErC50 No data available		> 0.0033 mg/l	72 h

Persistence and degradability

Component	Biodegradation	Exposure time	Summary
Hydrocarbons, C14-C18, n-alkanes, isoalkanes, cyclics, <2% aromatics	No data available		
Propane	70 %	< 10 d	Readily biodegradable
Butane	100 %	385.5 h	Readily biodegradable
Isobutane	70 %	< 10 d	Readily biodegradable
Isopropanol	53 %	5 d	Readily biodegradable
Imiprothrin	58 %	28 d	Not readily biodegradable.

Cypermethrin	0.6 - 1.4 %	33 d	Not readily biodegradable.

Bioaccumulative potential

Component	Bioconcentration factor (BCF)	Partition Coefficient n-Octanol/water (log)
Hydrocarbons, C14-C18, n-alkanes, isoalkanes, cyclics, <2% aromatics	No data available	No data available
Propane	No data available	2.36
Butane	No data available	2.89
Isobutane	1.57 - 1.97	2.8
Isopropanol	0.96 estimated	0.05
Imiprothrin	58.2 Calculated	2.9
Cypermethrin	373.4 Measured	5.3 - 5.6

Mobility

Component	End point	Value
Hydrocarbons, C14-C18, n-alkanes, isoalkanes, cyclics, <2% aromatics	No data available	-
Propane	No data available	
Butane	No data available	
Isobutane	No data available	
Isopropanol	No data available	
Imiprothrin	Koc	268
Cypermethrin	Koc	80653 - 574360

PBT and vPvB assessment

Component	Results
Propane	Not fulfilling PBT and vPvB criteria
Butane	Not fulfilling PBT and vPvB criteria
Isobutane	Not fulfilling PBT and vPvB criteria

Isopropanol	Not fulfilling PBT and vPvB criteria
Imiprothrin	Not fulfilling PBT and vPvB criteria
Cypermethrin	Not fulfilling PBT and vPvB criteria

Other adverse effects : None known.

13. DISPOSAL CONSIDERATIONS

PESTICIDAL WASTE:
For disposal information, please read and follow Disposal instructions on the pesticide label.
Consumer may discard empty container in trash, or recycle where facilities exist.

14. TRANSPORT INFORMATION

Please refer to the Bill of Lading/receiving documents for up-to-date shipping information.

	Land transport	**Sea transport**	**Air transport**
UN number	1950	1950	1950
UN proper shipping name	AEROSOLS, Flammable, 2.1	AEROSOLS, Flammable, 2.1	AEROSOLS, Flammable, 2.1
Transport hazard class(es)	2.1	2	2.1
Packing group	-	-	-
Environmental hazards	-	-	-
Special precautions for user	Limited quantities derogation may be applicable to this product, please check transport documents.	Limited quantities derogation may be applicable to this product, please check transport documents.	Limited quantities derogation may be applicable to this product, please check transport documents.

15. REGULATORY INFORMATION

FIFRA Labeling

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals.
Following is the hazard information as required on the pesticide label:

CAUTION:

Contents under pressure.
Exposure to temperatures above 130° F may cause bursting.
Flammable.

Notification status : All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

California Prop. 65 : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Registration # / Agency
4822-447/US/EPA

16. OTHER INFORMATION

HMIS Ratings

Health	2
Flammability	4
Reactivity	0

RAID® ANT & ROACH KILLER 17 (FRAGRANCE FREE)

Version *1*.1 Print Date 03/04/2015

Revision Date 02/24/2015 SDS Number 350000017506

NFPA Ratings

Health	2
Fire	4
Reactivity	0
Special	-

This information is being provided in accordance with the Occupational Safety and Health Administration (OSHA) regulation (29 CFR 1910.1200). The information supplied is designed for workplaces where product use and frequency of exposure exceeds that established for the labeled consumer use.

Further information

This document has been prepared using data from sources considered to be technically reliable. It does not constitute a warranty, expressed or implied, as to the accuracy of the information contained herein. Actual conditions of use are beyond the seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Prepared by	SC Johnson Global Safety Assessment & Regulatory Affairs (GSARA)

SC JOHNSON WAX -- RAID INDOOR FOGGER, 11605-7
MATERIAL SAFETY DATA SHEET
NSN: 684000N062666
Manufacturer's CAGE: 32204
Part No. Indicator: A
Part Number/Trade Name: RAID INDOOR FOGGER, 11605-7
==========

General Information

==========
Company's Name: SC JOHNSON WAX
Company's Street: 1525 HOWE ST
Company's City: RACINE
Company's State: WI
Company's Country: US
Company's Zip Code: 53405-5011
Company's Emerg Ph #: 800-851-7145
Company's Info Ph #: 414-631-2777
Record No. For Safety Entry: 001
Tot Safety Entries This Stk#: 001
Status: SMJ
Date MSDS Prepared: 09AUG91
Safety Data Review Date: 01SEP95
MSDS Preparer's Name: TERRY A. MEYERS
Preparer's Company: SAME
MSDS Serial Number: BYVDK
==========

Ingredients/Identity Information

==========
Proprietary: NO
Ingredient: 5-NORBORNENE-2,3-DICARBOXIMIDE, N-(2-ETHYLHEXYL)-; (N-OCTYL
BICYCLOHEPTENE DICARBOXIMIDE)
Ingredient Sequence Number: 01
Percent: 1.67
NIOSH (RTECS) Number: RB8575000
CAS Number: 463-04-7
OSHA PEL: N/K (FP N)
ACGIH TLV: N/K (FP N)

Proprietary: NO
Ingredient: KEROSENE (PETROLEUM), HYDROTREATED; (ISOPARAFFINIC HYDROCARBON)

Ingredient Sequence Number: 02
Percent: 10-15
NIOSH (RTECS) Number: OA5504000
CAS Number: 64742-47-8
OSHA PEL: N/K (FP N)
ACGIH TLV: N/K (FP N)
Other Recommended Limit: 200 PPM TLV (MFR)

Proprietary: NO
Ingredient: ETHANE, 1,1,1-TRICHLORO-; (1,1,1-TRICHLOROETHANE) (SARA 313)
(CERCLA)
Ingredient Sequence Number: 03
Percent: 55-70
NIOSH (RTECS) Number: KJ2975000
CAS Number: 71-55-6
OSHA PEL: 350 PPM
ACGIH TLV: 350 PPM; 450 STEL

Proprietary: NO
Ingredient: PROPANE; (MAY CONTAIN ING 4 OR ING 5)
Ingredient Sequence Number: 04
Percent: 20-30
NIOSH (RTECS) Number: TX2275000
CAS Number: 74-98-6
OSHA PEL: 1000 PPM
ACGIH TLV: ASPHYXIANT

Proprietary: NO
Ingredient: PROPANE, 2-METHYL-; (ISOBUTANE)
Ingredient Sequence Number: 05
Percent: 20-30
NIOSH (RTECS) Number: TZ4300000
CAS Number: 75-28-5
OSHA PEL: N/K (FP N)
ACGIH TLV: N/K (FP N)

Proprietary: NO
Ingredient: SUPDAT: AT LEAST TWO HOURS. VENT ENCLSD AREAS BEFORE RETURNING. IF SWALLOWED, DO NOT INDUCE VOMITING. GET MED ATTN.
Ingredient Sequence Number: 06
NIOSH (RTECS) Number: 9999999ZZ
OSHA PEL: NOT APPLICABLE
ACGIH TLV: NOT APPLICABLE
==========

Physical/Chemical Characteristics
==========
Appearance And Odor: DISPENSED AS A MIST WITH CHLORINATED SOLVENT ODOR.
Specific Gravity: 0.9 (H*2O=1)
Evaporation Rate And Ref: N/A
Solubility In Water: NEGLIGIBLE
Percent Volatiles By Volume: N/A
pH: N/A
==========
Fire and Explosion Hazard Data
==========
Flash Point: <20F,<-7C
Flash Point Method: TCC
Extinguishing Media: FOAM, CARBON DIOXIDE, DRY CHEMICAL, WATER FOG.
Special Fire Fighting Proc: WEAR NIOSH/MSHA APPRVD PRESS DEMAND SCBA &
FULL PROT EQUIP(FP N). NORM FIRE FIGHT PROCS MAY BE USED. FIGHT FIRE FROM
MAX DISTANCE/PROTECTED AREA. COOL (SUPDAT)
Unusual Fire And Expl Hazrds: THERMAL DECOMPOSITION PRODUCTS MAY INCLUDE
HCL AND PHOSGENE (FP N).
==========
Reactivity Data
==========
Stability: YES
Cond To Avoid (Stability): NONE KNOWN.
Materials To Avoid: STRONG ACIDS (E.G. MURIATIC ACID). STRONG OXIDIZING
MATERIALS (E.G. LIQUID CHLORINE).
Hazardous Decomp Products: HCL, PHOSGENE (FP N). WHEN EXPOSED TO FIRE, PRODUCES NORMAL PRODUCTS OF COMBUSTION. MAY FORM AN ACID MIST.
Hazardous Poly Occur: NO
Conditions To Avoid (Poly): NOT RELEVANT
==========
Health Hazard Data
==========

LD50-LC50 Mixture: NONE SPECIFIED BY MANUFACTURER.
Route Of Entry - Inhalation: YES
Route Of Entry - Skin: YES
Route Of Entry - Ingestion: YES
Health Haz Acute And Chronic: CHLOROCARBON MATLS HAVE PRDCED SENSIT OF THE
MYOCARDIUM TO EPINEPHRINE IN LAB ANIMALS & COULD HAVE A SIMILAR EFT IN
HUMANS. ADRENOMIMETICS (EG, EPINEPHRINE) MAY BE CONTRA-INDICATED EXCEPT FOR
LIFE-SUSTAINING USES IN HUMANS ACUTELY/CHRONICALLY EXPOSED TO CHLOROCARBONS
(FP N). DIRECT CNTCT OF PROD WITH (EFTS OF OVEREXP)
Carcinogenicity - NTP: NO
Carcinogenicity - IARC: NO
Carcinogenicity - OSHA: NO
Explanation Carcinogenicity: NOT RELEVANT
Signs/Symptoms Of Overexp: HLTH HAZ: EYES CAN CAUSE IRRIT. PRLNG/RPTD
CNTCT OF PROD W/SKIN MAY CAUSE IRRIT. PROD MAY CAUSE SEVERE DISTRESS &
SERIOUS ILLNESS IF TAKEN INTERNALLY. IF TAKEN INTERNALLY, ASPIRATION OF
LIQUID PRODUCT CAN CAUSE CHEM PNEUM. INHALATION OF PRODUCT VAPORS MAY CAUSE
CHEM INTOXICATION AT HIGH AIRBORNE CONCENTRATIONS.
Med Cond Aggravated By Exp: NONE KNOWN TO MANUFACTURER.
Emergency/First Aid Proc: INHAL: REMOVE TO FRESH AIR. SUPPORT BREATHING
(GIVE OXYGEN/ARTIFICIAL RESPIRATION) (FP N). EYES: FLUSH EYES WITH WATER
REMOVE WITH SOAP & WATER. INGEST: DO NOT INDUCE VOMITING. SEEK MEDICAL AID
AT ONCE. NOTES TO MD: MAY PRESENT ASPIRATION HAZARD.
==========

Precautions for Safe Handling and Use

==========
Steps If Matl Released/Spill: ELIMINATE ALL IGNITION SOURCES. DO NOT LET
SPILLED OR LEAKING MATERIAL ENTER WATERCOURSE. CONTAINS PESTICIDES & 1,1,1-
TRICHLOROETHANE. MAY BE TOXIC TO AQUATIC LIFE. ABSORB WITH OIL-DRI OR
SIMILAR INERT MATERIAL. SWEEP OR SCRAPE UP & CONTAINERIZE.
Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.
Waste Disposal Method: PESTICIDAL WASTE. OBSERVE ALL APPLICABLE

FEDERAL
AND STATE REGULATIONS AND LOCAL ORDINANCES REGARDING DISPOSAL OF PESTICIDE
WASTES.
Precautions-Handling/Storing: STORE IN COOL, DRY PLACE W/ADEQ VENT. DO NOT
PRESSURIZE, CUT, HEAT, WELD OR EXPOSE CNTNR TO FLAME; EXPLO COULD OCCUR.
PROD RESIDUE MAY REMAIN (SUPDAT)
Other Precautions: NO SMKNG IN AREA OF USE. DO NOT USE IN GEN VICIN OF ARC
WELDING/OPEN FLAMES/HOT SURFS. HEAT &/OR UV RADIA MAY CAUSE FORM OF HCL &/
OR PHOSGENE(FP N). KEEP OUT OF REACH OF CHILDREN. HARMFUL IF SWALLOWED/
ABSORBED THRU SKIN. AVOID CNTCT(SUPDAT)
==========

Control Measures

==========
Respiratory Protection: NO SPECIAL REQUIREMENTS WHEN LABEL DIRECTIONS ARE
FOLLOWED. IF REMAINING IN ENCLOSED AREAS DURING AND AFTER USE, USE
APPROPRIATE NIOSH/MSHA APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE.
Ventilation: VENTILATE AREA BEFORE RETURNING. DO NOT REMAIN IN ENCLOSED
AREAS DURING AND AFTER USE.
Protective Gloves: ANY IMPERVIOUS MATERIAL.
Eye Protection: ANSI APPRVD CHEM WORKERS GOGGS (FP N).
Other Protective Equipment: WHERE GROSS EYE/SKIN CONTACT MAY BE A PROBLEM,
WEAR/USE APPROPRIATE PROTECTIVE EQUIPMENT.
Work Hygienic Practices: USE GOOD PERSONAL HYGIENE PRACTICES. LAUNDER
CONTAMINATED CLOTHING/EQUIPMENT BEFORE REUSE.
Suppl. Safety & Health Data: FIRE FIGHT PROC: & USE CAUTION WHEN
APPROACHING/HNDLG FIRE-EXPOS CNTNRS. HNDLG/STOR PRECS: ON/IN EMPTY CNTNRS.
ALL PRECS FOR HNDLG PROD MUST BE USED IN HNDLG EMPTY CNTNR & RESIDUE. WASH
THORO AFTER HNDLG. OTHER PREC: W/SKIN, EYES/CLTHG. DO NOT REMAIN IN ENCLSD
AREAS AFTER USE. STAY OUT OF ROOM BEING TREATED FOR (ING 6)

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Transportation Data

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Disposal Data

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Label Data

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Label Required: NO
Label Status: X
Common Name: LABEL COVERED UNDER EPA REGS - HAZCOM LABEL NOT AUTHORIZED

Raid Wasp and Hornet Killer

OSU COLLEGE OF BIOLOGICAL SCIENCES MSDS FILE
S C JOHNSON & SON RACINE WI 53403 -- RAID WASP & HORNET KILLER, 11350
MATERIAL SAFETY DATA SHEET
FSC: 6840
NIIN: 004592443
Manufacturer's CAGE: 32204
Part No. Indicator: A
Part Number/Trade Name: RAID WASP & HORNET KILLER, 11350

==========

General Information

==========

Company's Name: S.C. JOHNSON & SON, INC/RACINE, WI 53403
Company's Emerg Ph #: (414) 631-2000
Record No. For Safety Entry: 007
Tot Safety Entries This Stk#: 023
Date MSDS Prepared: 01JAN87
Safety Data Review Date: 05AUG87
MSDS Serial Number: BBSKX

==========

Ingredients/Identity Information

==========

Proprietary: NO
Ingredient: DICHLORVOS (DDVP) (SARA III)
Ingredient Sequence Number: 01
Percent: 465%
NIOSH (RTECS) Number: TC0350000
CAS Number: 62-73-7
OSHA PEL: S, 1 MG/M3
ACGIH TLV: S, 0.1 MG/M3; 9192

Proprietary: NO
Ingredient: BAYGON
Ingredient Sequence Number: 02
Percent: 475%
NIOSH (RTECS) Number: 1000986BG

Proprietary: NO
Ingredient: NAPHTHA (PETROLEUM SPIRITS OR BENZIN)
Ingredient Sequence Number: 03
Percent: 40%
NIOSH (RTECS) Number: SE7555000
CAS Number: 8030-30-6
OSHA PEL: 100 PPM
ACGIH TLV: NOT ESTABLISHED

Proprietary: NO
Ingredient: METHYL CHLOROFORM (1,1,1-TRICHLOROEHANE) (SARA III)
Ingredient Sequence Number: 04

Percent: 65%
NIOSH (RTECS) Number: KJ2975000
CAS Number: 71-55-6
OSHA PEL: 350 PPM/450 STEL
ACGIH TLV: 350 PPM/450STEL;9192

Proprietary: NO
Ingredient: CARBON DIOXIDE
Ingredient Sequence Number: 05
Percent: 1-5%
NIOSH (RTECS) Number: FF6400000
CAS Number: 124-38-9
OSHA PEL: 5000 PPM
ACGIH TLV: 5000PPM/30000STEL;93

Physical/Chemical Characteristics

Appearance And Odor: DISPENSED AS A SPRAY STREAM W/SOLVENT ODOR
Boiling Point: NONE
Specific Gravity: 1.07
Evaporation Rate And Ref: NONE
Solubility In Water: NEGLIGIBLE

Fire and Explosion Hazard Data

Flash Point: NONE
Extinguishing Media: FOAM, CO2, DRY CHEMICAL, WATER FOG
Special Fire Fighting Proc: FIRE PROTECTED AREA. WEAR PROTECTIVE CLOTHING. SCBA.
Unusual Fire And Expl Hazrds: AEROSOL PRODUCT CONTAINERS MAY ROCKET OR EXPLODE IN HEAT. BURNING MAY PRODUCE ACID MIST, TOXIC FUMES

Reactivity Data

Stability: YES
Materials To Avoid: STRONG OXIDIZERS, ALKALIS/BASES/CAUSTICS/ACIDS/ ALUMINUM/ZINC
Hazardous Decomp Products: MAY FORM AN ACID MIST AND TOXIC FUMES.
Hazardous Poly Occur: NO

Health Hazard Data

Signs/Symptoms Of Overexp: PROLONGED OR REPEATED CONTACT OF PRODUCT W/ SKIN MAY CAUSE IRRITATION.
Emergency/First Aid Proc: EYES: FLUSH W/WATER FOR 15 MINUTES. IF IRRITATION PERSISTS, SEEK MEDICAL AID. SKIN: REMOVE W/SOAP & WATER. IF SWALLOWED: DON'T INDUCE VOMITING. SEEK MEDICAL AID> IF CHLOLINESTRERASE INHIBITION IS PRESENT, ATROPINE IS ANTIDOTAL.

Precautions for Safe Handling and Use

Steps If Matl Released/Spill: WIPE UP SPILL WITH CLOTH. RINSE AFFECTED AREA THOROUGHLY WITH WATER.
Waste Disposal Method: DISPOSE OF AEROSOL CAN BY WRAPPING AND PLACING IN TRASH. DON'T PUNCTURE OR BURN CONTAINER. DISPOSE OF SPILLED RESIDUES & MULTIPLE UNITS ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.
Precautions-Handling/Storing: PRODUCT RESIDUE MAY REMAIN IN EMPTY CONTAINERS. DON'T PRESSURIZE/CUT/HEAT/WELD/EXPOSE CONTAINETO FLAME; EXPLOSION COULD OCCUR.
Other Precautions: KEEP OUT OF REACH OF CHILDREN. HARMFUL IF SWALLOWED OR ABSORBED THROUGH THE SKIN. AVOID CONTACT W/SKIN/EYES/CLOTHING. GASTRILAVAGE IS INDICATED IF TAKEN INTERNALLY.

Control Measures

Respiratory Protection: IF VENTILATION IS ADEQUATE, RESPIRATORY PROTECTION NOT REQUIRED.
Ventilation: OUTDOOR USE ONLY. DON'T USE INDOORS OR POORLY VENT AREAS
Protective Gloves: RUBBER/PVC
Eye Protection: GOGGLES
Other Protective Equipment: WEAR APPROPRIATE PROTECTIVE & OTHER IMPERVIOUS MATERIAL.
Suppl. Safety & Health Data: MSDS DATE: 07/19/85

Transportation Data

Disposal Data

Disposal Data Action Code: A
Disposal Data Review Date: 90094
Rec # For This Disp Entry: 01
Tot Disp Entries Per NSN: 001
Landfill Ban Item: YES
Disposal Supplemental Data: HMIS RATING:HEALTH-0,FLAMMABILITY-4, REACTIVITY-0. IN CASE OF ACCIDENTAL EXPOSURE OR DISCHARGE, CONSULT HEALTH AND SAFETY FILE FOR PRECAUTIONS.
1st EPA Haz Wst Code New: D001
1st EPA Haz Wst Name New: IGNITIBLE
1st EPA Haz Wst Char New: IGNITABILITY
1st EPA Acute Hazard New: NO

Label Data

Label Required: NO *
Label Status: X *

Raid Wasp and Hornet Killer

Common Name: LABEL COVERED UNDER EPA REGS - HAZCOM LABEL NOT AUTHORIZED *

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URL for this msds http://hazard.com. If you wish to change, add to, or delete information in this archive please sent updates to dan@hazard.com.

Material Safety Data Sheet

1. MATERIAL AND COMPANY IDENTIFICATION

Material Name : **Rain-X Weatherbeater 2-in-1 Glass Cleaner**
Uses : Glass cleaner

Manufacturer/Supplier : **SOPUS Products**
PO BOX 4427
Houston, TX 77210-4427
USA
MSDS Request : 877-276-7285

Emergency Telephone Number
Spill Information : 877-242-7400
Health Information : 877-504-9351

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Identity	CAS No.	Concentration
Isopropyl Alcohol	67-63-0	>= 1.00 - < 5.00 %

3. HAZARDS IDENTIFICATION

Emergency Overview
Appearance and Odour : Clear. Liquid. Alcohol-like.

Health Hazards
Inhalation : No specific hazards under normal use conditions.
Skin Contact : No specific hazards under normal use conditions.
Eye Contact : No specific hazards under normal use conditions.
Ingestion : No specific hazards under normal use conditions.
Environmental Hazards : No specific hazards under normal use conditions.
Additional Information : Under normal conditions of use or in a foreseeable emergency, this product does not meet the definition of a hazardous chemical when evaluated according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

4. FIRST AID MEASURES

General Information : Not expected to be a health hazard when used under normal conditions.
Inhalation : No treatment necessary under normal conditions of use.
Skin Contact : No treatment necessary under normal conditions of use.
Eye Contact : No treatment necessary under normal conditions of use.
Ingestion : No treatment necessary under normal conditions of use.
Advice to Physician : Consult a Poison Control Centre for guidance.

5. FIRE FIGHTING MEASURES

Flash point	:	> 65.6 °C / > 150.1 °F
Upper / lower Flammability or Explosion limits	:	Data not available
Specific Hazards	:	This product is a mixture of water and a water miscible alcohol, and does not present a significant flammability hazard when used by consumers.
Suitable Extinguishing Media	:	Not applicable.

6. ACCIDENTAL RELEASE MEASURES

Protective measures	:	Not applicable. No specific measures.
Clean Up Methods	:	Not applicable.
Additional Advice	:	Observe all relevant local and international regulations.

7. HANDLING AND STORAGE

Handling	:	Use only in well-ventilated areas.
Storage	:	No special storage requirements.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Material	Source	Type	ppm	mg/m3	Notation
Isopropyl Alcohol	ACGIH	TWA	200 ppm		
Isopropyl Alcohol	ACGIH	STEL	400 ppm		
Isopropyl Alcohol	OSHA Z1	PEL	400 ppm	980 mg/m3	
Isopropyl Alcohol	OSHA Z1A	TWA	400 ppm	980 mg/m3	
Isopropyl Alcohol	OSHA Z1A	STEL	500 ppm	1,225 mg/m3	
Isopropyl Alcohol	ACGIH	TWA	200 ppm		
Isopropyl Alcohol	ACGIH	STEL	400 ppm		

Additional Information : Adequate ventilation to control airborne concentrations below the exposure guidelines/limits.

Biological Exposure Index (BEI) - See reference for full details
Data not available

Exposure Controls : Adequate ventilation to control airborne concentrations below the exposure guidelines/limits.

Personal Protective Equipment	:	Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.
Respiratory Protection	:	No respiratory protection is ordinarily required under normal conditions of use.
Hand Protection	:	Not normally required.
Eye Protection	:	Keep under ...

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Clear. Liquid.
Odour	:	Alcohol-like.
pH	:	3 - 4
Initial Boiling Point and Boiling Range	:	82 °C / 180 °F
Melting / freezing point	:	Data not available
Flash point	:	> 65.6 °C / > 150.1 °F
Upper / lower Flammability or Explosion limits	:	Data not available
Vapour pressure	:	Data not available
Water solubility	:	Soluble.
Kinematic viscosity	:	Data not available

10. STABILITY AND REACTIVITY

Stability	:	Stable under normal conditions of use.
Conditions to Avoid	:	Not applicable.
Materials to Avoid	:	Not applicable.
Hazardous Decomposition Products	:	None expected under normal use conditions.
Hazardous Polymerisation	:	No
Sensitivity to Mechanical Impact	:	No

11. TOXICOLOGICAL INFORMATION

Basis for Assessment	:	Information given is based on data from components.
Acute Oral Toxicity	:	Expected to be of low toxicity: LD50 >2000 mg/kg
Acute Dermal Toxicity	:	Expected to be of low toxicity: LD50 >2000 mg/kg
Acute Inhalation Toxicity	:	Expected to be of low toxicity: LC50 >20 mg/l
Skin Irritation	:	Expected to be non-irritating to skin.
Eye Irritation	:	Expected to be non-irritating to eyes.
Respiratory Irritation	:	Not expected to be a respiratory irritant.
Sensitisation	:	Not a skin sensitiser.
Mutagenicity	:	No evidence of mutagenic activity.
Carcinogenicity	:	Not a carcinogen.

Material	:	**Carcinogenicity Classification**
Isopropyl Alcohol	:	ACGIH Group A4: Not classifiable as a human carcinogen.
Isopropyl Alcohol	:	IARC 3: Classification not possible from current data.

Reproductive and Developmental Toxicity	:	Not a developmental toxicant.

12. ECOLOGICAL INFORMATION

Ecotoxicological data have not been determined specifically for this product.

Acute Toxicity	:	Data not available
Mobility	:	Disperses in water.
Persistence/degradability	:	Data not available
Bioaccumulation	:	Data not available
Other Adverse Effects	:	Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

13. DISPOSAL CONSIDERATIONS

Material Disposal	:	Do not dispose into the environment, in drains or in water courses.
Local Legislation	:	Disposal should be in accordance with applicable regional, national, and local laws and regulations.

14. TRANSPORT INFORMATION

US Department of Transportation Classification (49CFR)
This material is not subject to DOT regulations under 49 CFR Parts 171-180.

IMDG
This material is not classified as dangerous under IMDG regulations.

IATA (Country variations may apply)
This material is not classified as dangerous under IATA regulations.

15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Federal Regulatory Status

Notification Status

EINECS	All components listed.
TSCA	All components listed.
DSL	All components listed.

Comprehensive Environmental Release, Compensation & Liability Act (CERCLA)

Rain-X Weatherbeater 2-in-1 Glass Cleaner ()	Reportable quantity: 5000 lbs

Isopropyl Alcohol	(67-63-0)	Reportable quantity: 100 lbs

SARA Toxic Release Inventory (TRI) (313)

Isopropyl Alcohol	(67-63-0)	2.00%

State Regulatory Status

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

This material does not contain any chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

New Jersey Right-To-Know Chemical List

Isopropyl Alcohol	(67-63-0)	Listed.
		Listed.

Pennsylvannia Right-To-Know Chemical List

Isopropyl Alcohol	(67-63-0)	Environmental hazard. Listed.

16. OTHER INFORMATION

MSDS Version Number	:	1.1
MSDS Effective Date	:	08/27/2008
MSDS Revisions	:	A vertical bar (|) in the left margin indicates an amendment from the previous version.
MSDS Regulation	:	The content and format of this MSDS is in accordance with the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
MSDS Distribution	:	The information in this document should be made available to all who may handle the product.
Disclaimer	:	The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty or guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product.

Material Safety Data Sheet

Section 1: PRODUCT AND COMPANY INFORMATION

Product Name(s): Continental Building Products Joint Compound, Ready Mixed

Product Identifiers: Rapid Coat® Lightweight (White, Beige and Yellow), Rapid Coat® Midweight, Rapid Coat® Low Dust, Rapid Coat® Fullweight, Rapid Coat® Pro All Purpose Lite.

Manufacturer:
Continental Building Products Inc.
12950 Worldgate Drive, suite 700
Herndon, VA 20170

Information Telephone Number:
800.237.5505 (9am to 5pm EST)

Emergency Telephone Number:
800.451.8346 (3E Hotline)

Product Use: Joint Compound is used for gypsum board finishing in commercial and residential construction.

Note: This MSDS covers many types of joint compound. Individual composition of hazardous constituents will vary between types of joint compound.

Section 2: COMPOSITION/INFORMATION ON INGREDIENTS

Component	Percent (By Weight)	CAS Number	OSHA PEL -TWA (mg/m^3)	ACGIH TLV-TWA (mg/m^3)	LD_{50} Oral	LC_{50} Rat, Inhalation
Calcium Carbonate*	20-70	1317-65-3	15 (T), 5 (R)	3 (R); 10 (T)	NA	NA
Talc*	0-20	14807-96-6	3 (T)	2 (R)	NA	NA
Mica *	0-20	12001-26-2	3 (R)	3 (R)	NA	NA
Crystalline Silica (as Quartz)	0-10	14808-60-7	[(10) / (%SiO_2+2)] (R); [(30) / (%SiO_2+2)] (T)	0.025 (R)	0.5 g/kg, Rat	NA
Perlite*	0-15	93763-70-3	15 (T), 5 (R)	3 (R); 10 (T)	13g/kg, Mouse	NA
Cellulose	0-5	9004-34-6	15 (T), 5 (R)	10 (T)	>5 g/kg, Rat	>5.8 g/m3/4H
Polyvinyl Acetate	0.2-10	9003-20-7	NA	NA	>25 g/kg, Rat	NA
Attapulgite	0-5	12174-11-7	NA	NA	NA	NA
Starch	0-5	9005-25-8	15 (T), 5 (R)	10 (T)	6.6 g/kg (I, M)	NA
Triazine	0-2	4719-04-4	NA	NA	0.8 g/kg, rat	NA

Note: Exposure limits for components noted with an * contain no asbestos and <1% crystalline silica
(I, M) = LD_{50} Intraperitoneal and Mouse

Section 3: HAZARD IDENTIFICATION

WARNING

Toxic - Harmful by inhalation.
(Contains crystalline silica)

Use proper engineering controls, work practices, and Personal Protective Equipment (PPE) to prevent exposure to dust.

Read MSDS for details.

Emergency Overview: Joint compound is a paste that is white or beige in color. Joint compound has a slight odor. Joint compound is not combustible or explosive. A single, short-term exposure to joint compound and joint compound dust presents little or no hazard.

Section 3: HAZARD IDENTIFICATION (continued)

Potential Health Effects:

Eye Contact: Eye contact to airborne dust may cause immediate or delayed irritation or inflammation. Eye exposures require immediate first aid and medical attention to prevent significant damage to the eye.

Skin Contact: Direct, prolonged, or repeated contact may cause dry skin, discomfort, and irritation.

Inhalation (acute): Breathing dust may cause nose, throat or lung irritation, including choking, depending on the degree of exposure.

Inhalation (chronic): Risk of injury depends on duration and level of exposure.

Silicosis: This product contains crystalline silica. Prolonged or repeated inhalation of respirable crystalline silica from this product can cause silicosis, a seriously disabling and fatal lung disease. See Note to Physicians in Section 4 for further information.

This product contains mica and talc. Prolonged and repeated inhalation of respirable mica or talc dust may cause lung disease (pneumoconiosis). The extent and severity of lung injury depends on duration and level of exposure.

Carcinogenicity: Crystalline silica is classified by IARC and NTP as a known human carcinogen.

This product contains Polyvinyl Acetate. This polymer is not classified as a carcinogen by IARC or NTP. However, trace amounts of residual vinyl acetate monomers may be present, which is classified as a possible human carcinogen by IARC.

Autoimmune Disease: Some studies show that exposure to respirable crystalline silica (without silicosis) or that the disease silicosis may be associated with the increased incidence of several autoimmune disorders such as scleroderma (thickening of the skin), systemic lupus erythematosus, rheumatoid arthritis and diseases affecting the kidneys.

Tuberculosis: Silicosis increases the risk of tuberculosis.

Renal Disease: Some studies show an increased incidence of chronic kidney disease and end-stage renal disease in workers exposed to respirable crystalline silica.

Ingestion: Do not ingest joint compound. Ingestion of small quantities of joint compound is not known to be harmful; ingesting large quantities can cause intestinal distress.

Medical Conditions Aggravated by Exposure: Individuals with lung disease (e.g. bronchitis, emphysema, COPD, pulmonary disease) can be aggravated by exposure to dust.

Section 4: FIRST AID MEASURES

Eye Contact: Rinse eyes thoroughly with water for at least 15 minutes, including under lids, to remove all particles. Seek medical attention for abrasions.

Skin Contact: Wash with cool water and a pH neutral soap or a mild skin detergent. Seek medical attention for rash or irritation.

Inhalation: Move person to fresh air. Seek medical attention for discomfort or if coughing or other symptoms do not subside.

Ingestion: Do not induce vomiting. If conscious, have person drink plenty of water. Seek medical attention or contact poison control center immediately.

Section 4: FIRST AID MEASURES (continued)

Note to Physician: The three types of silicosis include:

- Simple chronic silicosis – which results from long-term exposure (more than 20 years) to low amounts of respirable crystalline silica. Nodules of chronic inflammation and scarring provoked by the respirable crystalline silica form in the lungs and chest lymph nodes. This disease may feature breathlessness and may resemble chronic obstructive pulmonary disease (COPD).
- Accelerated silicosis – occurs after exposure to larger amounts of respirable crystalline silica over a shorter period of time (5-15 years). Inflammation, scarring, and symptoms progress faster in accelerated silicosis than in simple silicosis.
- Acute silicosis – results from short-term exposure to very large amounts of respirable crystalline silica. The lungs become very inflamed and may fill with fluid, causing severe shortness of breath and low blood oxygen levels.

Progressive massive fibrosis may occur in simple or accelerated silicosis, but is more common in the accelerated form. Progressive massive fibrosis results from severe scarring and leads to the destruction of normal lung structures.

Section 5: FIREFIGHTING MEASURES

Flashpoint & Method: Non-combustible

General Hazard: Avoid breathing dust.

Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Combustion Products: May release irritating gases if heated above 93° C.

Firefighting Equipment: Joint compound poses no fire-related hazard. A SCBA is recommended to limit exposures to combustion products when fighting any fire.

Section 6: ACCIDENTAL RELEASE MEASURES

General: Shovel or scoop up material from spilled joint compound into a container. Avoid actions that cause dust to become airborne. Avoid inhalation of dust. Wear appropriate protective equipment as described in Section 8.

Waste Disposal Method: Dispose of joint compound according to Federal, State, Provincial and Local regulations.

Section 7: HANDLING AND STORAGE

General: Stack containers of material in a secure manner to prevent falling. Do not stack more than 4 boxes or 3 pails high to prevent container failure. Joint compound containers are heavy and pose risks such as sprains and strains to the back, arms, shoulders and legs during lifting and mixing. Handle with care and use appropriate control measures.

Usage: Cutting, crushing, sanding or grinding joint compound, drywall or other crystalline silica-bearing materials will release respirable crystalline silica. Use all appropriate measures of dust control or suppression, and Personal Protective Equipment (PPE) described in Section 8 below.

Do not use if material has spoiled and is moldy or has an unpleasant odor. Close container and discard properly. Keep container tightly sealed following use.

Housekeeping: Avoid actions that cause dust to become airborne during sanding and clean-up such as dry sweeping or using compressed air. Use HEPA vacuum or thoroughly wet with water to clean-up dust. Use PPE described in Section 8 below.

Section 7: HANDLING AND STORAGE (continued)

Storage Temperature: Store at room temperature in a dry location. Protect from freezing, extreme heat, or direct sunlight.

Storage Pressure: Unlimited.

Clothing: Remove and launder clothing that is dusty before it is reused.

Section 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls: Use local exhaust or general dilution ventilation or other suppression methods to maintain dust levels below exposure limits.

Personal Protective Equipment (PPE):

Respiratory Protection: Under ordinary conditions no respiratory protection is required. Wear a NIOSH approved respirator that is properly fitted and is in good condition when exposed to dust above exposure limits.

Eye Protection: Wear ANSI approved glasses or safety goggles when handling or sanding joint compound to prevent dust coming in contact with eyes. Wearing contact lenses when using joint compound under dusty conditions, is not recommended.

Skin Protection: Wear gloves when handling joint compound. Remove clothing and protective equipment that becomes dusty and launder before reusing.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Paste	**Evaporation Rate:**	NA.
Appearance:	White or Beige in color.	**pH (in water):**	7-10
Odor:	Little	**Boiling Point:**	212°F (100°C)
Vapor Pressure:	17 mm Mercury at 20°	**Freezing Point:**	32°F (0°C)
Vapor Density:	C Based on water, 0.62	**Viscosity:**	About 500 Brabender units
Specific Gravity:	0.9-1.7	**Solubility in Water:**	Completely dispersed
Percent Volatile:	30-60% by volume	**VOC Content:**	< 2 g/l

Section 10: STABILITY AND REACTIVITY

Stability: Stable. Avoid contact with incompatible materials.

Incompatibility: Avoid all products that may react with water. The components of joint compound are incompatible with strong oxidizers, strong acids, diazomethane, ammonium salts, aluminum, fluorine and red phosphorous.

Hazardous Polymerization: None.

Hazardous Decomposition: Thermal decomposition may yield acrylic monomer vapors (above 177°C/350°F), sulfur oxides, formaldehyde, ammonia, and calcium oxide fumes (above 825°C). Formaldehyde will be generated when exposed to acidic conditions.

Section 11 and 12: TOXICOLOGICAL AND ECOLOGICAL INFORMATION

For questions regarding toxicological and ecological information refer to contact information in Section 1.

Section 13: DISPOSAL CONSIDERATIONS

Dispose of waste and containers in compliance with applicable Federal, State, Provincial and Local regulations.

Section 14: TRANSPORT INFORMATION

This product is not classified as a Hazardous Material under U.S. DOT or Canadian TDG regulations.

Section 15: REGULATORY INFORMATION

OSHA/MSHA Hazard Communication: This product is considered by OSHA/MSHA to be a hazardous chemical and should be included in the employer's hazard communication program.

CERCLA/SUPERFUND: This product is not listed as a CERCLA hazardous substance.

EPCRA SARA Title III: This product has been reviewed according to the EPA Hazard Categories promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 and is considered a hazardous chemical and a delayed health hazard.

EPRCA SARA Section 313: This product contains none of the substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

RCRA: If discarded in its purchased form, this product would not be a hazardous waste either by listing or characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

TSCA: Crystalline silica is exempt from reporting under the inventory update rule.

California Proposition 65: Crystalline silica (airborne particulates of respirable size) is known by the State of California to cause cancer.

WHMIS/DSL: Products containing crystalline silica, talc, and calcium carbonate are classified as D2A and are subject to WHMIS requirements.

Section 16: OTHER INFORMATION

Abbreviations:

>	Greater than	NA	Not Applicable
ACGIH	American Conference of Governmental Industrial Hygienists	NFPA	National Fire Protection Association
CAS No	Chemical Abstract Service number	NIOSH	National Institute for Occupational Safety and Health
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act	NTP	National Toxicology Program
		OSHA	Occupational Safety and Health Administration
CFR	Code for Federal Regulations	PEL	Permissible Exposure Limit
CL	Ceiling Limit	pH	Negative log of hydrogen ion
DOT	U.S. Department of Transportation	PPE	Personal Protective Equipment
EST	Eastern Standard Time	R	Respirable Particulate
HEPA	High-Efficiency Particulate Air	RCRA	Resource Conservation and Recovery Act
HMIS	Hazardous Materials Identification System	SARA	Superfund Amendments and Reauthorization Act
IARC	International Agency for Research on Cancer	T	Total Particulate
		TDG	Transportation of Dangerous Goods
LC_{50}	Lethal Concentration	TLV	Threshold Limit Value
LD_{50}	Lethal Dose	TWA	Time Weighted Average (8 hour)
mg/m^3	Milligrams per cubic meter	WHMIS	Workplace Hazardous Materials Information System
MSHA	Mine Safety and Health Administration		

Section 16: OTHER INFORMATION (continued)

This MSDS (Sections 1-16) was revised on April 11, 2014.

An electronic version of this MSDS is available at: www.continental-bp.com under the Resources section.

Continental Building Products (CBP) believes the information contained herein is accurate; however, CBP makes no guarantees with respect to such accuracy and assumes no liability in connection with the use of the information contained herein which is not intended to be and should not be construed as legal advice or as insuring compliance with any federal, state or local laws or regulations. Any party using this product should review all such laws, rules, or regulations prior to use, including but not limited to US and Canada Federal, Provincial and State regulations.

NO WARRANTY IS MADE, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE.

SAFETY DATA SHEET

1. Identification

Product identifier **Hercules Real Tuff**

Other means of identification

SDS number 7324E

Synonyms Part Numbers: 15605, 15615, 15620, 15625, 15630, 15632, 15635, 15640

Recommended use Multipurpose thread sealant

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company Name HCC Holdings, Inc. an Oatey Affiliate

Address 4700 West 160th Street
Cleveland, OH 44135

Telephone 216-267-7100

E-mail info@oatey.com

Transport Emergency Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)

Emergency First Aid 1-877-740-5015

Contact person MSDS Coordinator

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement The mixture does not meet the criteria for classification.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response Wash hands after handling.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information

Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Petroleum distillates, solvent refined heavy parrafinic	64741-88-4	15-40
Talc	Mixture	15-40
Polyfluoroethylene	9002-84-0	10-30
Titanium dioxide	13463-67-7	5-10
Castor Oil, Oxidized	68187-84-8	1-5
SOYBEAN LECITHIN	8002-43-5	1-5

Silica, amorphous, fumed	112945-52-5	1-5

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed Direct contact with eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed Treat symptomatically.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Use water spray to cool unopened containers.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up This product is miscible in water. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Avoid prolonged exposure. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Petroleum distillates, solvent refined heavy parrafinic (CAS 64741-88-4)	PEL	5 mg/m3	Mist.
		2000 mg/m3	
		500 ppm	
Titanium dioxide (CAS 13463-67-7)	PEL	15 mg/m3	Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value
Silica, amorphous, fumed (CAS 112945-52-5)	TWA	0.8 mg/m3
		20 mppcf

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Petroleum distillates, solvent refined heavy parrafinic (CAS 64741-88-4)	TWA	5 mg/m3	Inhalable fraction.
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Petroleum distillates, solvent refined heavy parrafinic (CAS 64741-88-4)	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
Silica, amorphous, fumed (CAS 112945-52-5)	TWA	6 mg/m3	

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear protective gloves.

Other Wear appropriate chemical resistant clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance Paste.

Physical state Solid.

Form Solid.

Color White.

Odor Odorless

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	< 1
Relative density	1.56
Solubility(ies)	
Solubility (water)	slightly soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	20000 - 50000 cP
Other information	
VOC (Weight %)	6 g/l

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity	Not available.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not available.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Risk of cancer cannot be excluded with prolonged exposure.

IARC Monographs. Overall Evaluation of Carcinogenicity

Silica, amorphous, fumed (CAS 112945-52-5)	3 Not classifiable as to carcinogenicity to humans.
Titanium dioxide (CAS 13463-67-7)	2B Possibly carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not available.
Chronic effects	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

15. Regulatory information

US federal regulations All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Petroleum distillates, solvent refined heavy parrafinic (CAS 64741-88-4)
Silica, amorphous, fumed (CAS 112945-52-5)
Titanium dioxide (CAS 13463-67-7)

US. New Jersey Worker and Community Right-to-Know Act

Titanium dioxide (CAS 13463-67-7)

US. Pennsylvania Worker and Community Right-to-Know Law

Silica, amorphous, fumed (CAS 112945-52-5)
Titanium dioxide (CAS 13463-67-7)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Titanium dioxide (CAS 13463-67-7)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	30-July-2014
Revision date	10-December-2014
Version #	02
HMIS® ratings	Health: 0 Flammability: 0 Physical hazard: 0

Disclaimer The information in the sheet was written based on the best knowledge and experience currently available.

DRUMMOND™
A LAWSON BRAND

Material Safety Data Sheet

Revision Date *11-Jul-2013*

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product code DL3010 55
Product name Recoil
Recommended Use Cleaner

Supplier Drummond, A Lawson Brand
Lawson Products, Inc.
8770 W.Bryn Mawr Ave.- Suite 900
Chicago, IL 60631
1-866-529-7664

Emergency telephone number (888) 426-4851

2. HAZARDS IDENTIFICATION

Emergency Overview
Harmful by inhalation, in contact with skin and if swallowed.

Aggravated Medical Conditions
Pre-existing diseases of the central nervous system. Pre-existing skin, eye, or respiratory conditions may be aggravated by exposure to this product. Pre-existing kidney disorders. Pre-existing gastrointestinal disorders.

Principal Routes of Exposure
Eyes. Ingestion. Skin contact.

Potential health effects

Eyes Corrosive to the eyes and may cause severe damage including blindness. Corneal damage. Tearing. Redness.

Skin Corrosive. Prolonged skin contact may cause skin irritation. May be absorbed through the skin in harmful amounts.

Inhalation Irritating to respiratory system. Prolonged overexposure may cause. Central nervous system damage.

Ingestion Harmful if swallowed. Corrosive. Can burn mouth, throat, and stomach. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Abdominal pain. Repeated or prolonged exposure may cause:. Kidney damage.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Water	7732-18-5	60-100
Nonylphenol Ethoxylate	9016-45-9	1-5
Quaternary mixture	mixture	1-5
Potassium hydroxide	1310-58-3	1-5
Amine Oxide	1643-20-5	1-5
EDTA	64-02-8	1-5
Sodium metasilicate	6834-92-0	1-5
Tetrapotassium Pyrophosphate	7320-34-5	1-5

4. FIRST AID MEASURES

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek medical attention IMMEDIATELY.

Skin contact Wash off immediately with plenty of water for at least 15 minutes. Remove contaminated clothing. Wash area thoroughly with soap and water. Seek medical attention if irritation persists.

Ingestion Do Not induce vomiting. Give large amounts of milk or water. Seek medical attention immediately. Never give anything by mouth to an unconscious person.

Inhalation Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Immediate medical attention is required.

5. FIRE FIGHTING MEASURES

Flash point °C None
Flash point °F None
Method Tag Closed Cup

Autoignition temperature °C Not Applicable
Autoignition temperature °F Not Applicable

Flammability Limits (% in Air)
Upper No data available
Lower No data available

Suitable extinguishing media
Use extinguishing media appropriate to surrounding fire . Alcohol foam. Carbon dioxide (CO2). Dry chemical powder. Water spray.

Special protective equipment for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

Special Fire-Fighting Procedures
Water should be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. Do not release run-off from fire control methods to sewers or waterways .

Specific hazards
Thermal degradation may produce irritating or poisonous gases .

Fire and Explosion Hazards
Dried residue may be ignited by extreme heat, sparks or flame.

Hazardous decomposition products
See Section 10.

Sensitivity to shock
No information available.

Sensitivity to static discharge
No information available.

6. ACCIDENTAL RELEASE MEASURES

Methods for cleaning up
Personnel should wear appropriate protective equipment. Follow all precautions for handling. Please refer to appropriate sections of MSDS for additional information. Dike or dam large spills. Prevent product from entering drains. Neutralize remaining traces of material with any dilute inorganic acid (e.g. hydrochloric, sulfuric, nitric or phosphoric). Flush area with water and cover liberally with sodium bicarbonate . Reclaim into containers for reuse, recycle, or proper disposal.

7. HANDLING AND STORAGE

Handling
Wear personal protective equipment. Use caution when handling. Avoid contact with skin, eyes and clothing. Do not swallow. Avoid breathing vapors or mists. Keep container closed when not in use. Remove and wash contaminated clothing before re-use. Do not ingest. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such contents to heat, flames, and other sources of ignition. Handle empty containers as if they were full. Thoroughly wash hands and exposed skin after handling.

Storage
Keep away from open flames, hot surfaces and sources of ignition. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	OSHA PEL (TWA)	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Nonylphenol Ethoxylate	-	-	-	-
Tetrapotassium Pyrophosphate	-	-	-	-
Potassium hydroxide	-	-	-	-
EDTA	-	-	-	-
Water	-	-	-	-
Sodium metasilicate	-	-	-	-
Amine Oxide	-	-	-	-
Quaternary mixture	-	-	-	-

Ventilation and Environmental Controls
Use enough ventilation, local exhaust at the work area, general, or both, to keep below the TLV's in the worker's breathing zone and the general area. Local: recommended.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use.

Respiratory protection
Follow OSHA respirator regulations (29 CFR 1910.134) and if necessary, wear a MSHA/NIOSH approved respirator. Wear a NIOSH approved alkali mist respirator. Protection provided by air purifying respirators is limited. Use a positive pressure supplied air respirator. if there is any potential for an uncontrolled release:. where exposure levels are not known.

Hand Protection
Protective gloves.

Eye protection
Use safety eyewear designed to protect against splash of liquids.

Skin and body protection
Wear appropriate clothing to minimize skin contact.

Other Protective Equipment
A safety shower and eye wash station should be available for emergency use.

Environmental exposure controls
Do not allow material to contaminate ground water system.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	Liquid
Color	Clear Green
Odor	Mint-like
Odor Threshold	Not Applicable
pH	13.5
Specific Gravity	1.07
Vapor pressure	Not Applicable
Vapor density	<1 (Air = 1)
Evaporation Rate	<1 (Butyl Acetate = 1)
Water solubility	Soluble in water
VOC Content	0
Partition Coefficient (n-octanol/water)	Not Applicable
Boiling point/range °C	100
Boiling point/range °F	212
Melting point/range °C	-7
Melting point/range °F	20
Flash point °C	None
Flash point °F	None

10. STABILITY AND REACTIVITY

Stability
Stable under normal conditions.

Conditions to avoid
Contact with active metals can release flammable hydrogen gas. Avoid extreme heat.

Incompatability
Strong oxidizing agents. Reducing agents. Strong acids. Active metals (i.e. zinc, magnesium, tin, aluminum and their alloys) .

Hazardous Decomposition Products
Thermal decomposition can lead to release of irritating gases and vapours. Carbon monoxide. Carbon dioxide. Nitrogen oxides (NOx). ammonia. Various hydrocarbons.

Polymerization
Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Component Information

Chemical Name	LD50 (oral,rat)	LD50 (dermal,rat/rabbit)	LC50 (inhalation,rat)
Nonylphenol Ethoxylate 9016-45-9	-	1780 µL/kg	-
Tetrapotassium Pyrophosphate 7320-34-5	-	-	-
Potassium hydroxide 1310-58-3	214 mg/kg	-	-
EDTA 64-02-8	-	-	-
Water 7732-18-5	-	-	-
Sodium metasilicate 6834-92-0	600 mg/kg	-	-
Amine Oxide 1643-20-5	-	-	-
Quaternary mixture mixture	-	-	-

Synergistic Products None known

Potential health effects

Sensitization None known .

Chronic toxicity See Section 2 .

Mutagenic effects None known .

Teratogenic effects None known .

Reproductive toxicity None known .

Target Organ Effects Eyes. Skin. Respiratory system. Central nervous system. Gastrointestinal system.

Carcinogenic effects See table below

Chemical Name	ACGIH OEL - Carcinogens	IARC	NTP - Known Carcinogens	NTP - Suspected Human Carcinogens	OSHA RTK Carcinogens
Nonylphenol Ethoxylate	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Tetrapotassium Pyrophosphate	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Potassium hydroxide	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
EDTA	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Water	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Sodium metasilicate	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Amine Oxide	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed
Quaternary mixture	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed

12. ECOLOGICAL INFORMATION

EDTA
Water Flea Data
Daphnia magna EC50=610 mg/L (24 h)
Sodium metasilicate
Water Flea Data
Daphnia magna EC50=216 mg/L (96 h)
Tetrapotassium Pyrophosphate
Water Flea Data
water flea EC50>100 mg/L (48 h)

13. DISPOSAL CONSIDERATIONS

Disposal Information
Carefully follow label instructions for disposal . Do not use pressure to empty containers . Do not contaminate water, foodstuffs, seed, or feed by disposal. Emptied container retains product residue. Dispose of all product, residues and clean-up materials in accordance with local, state, and federal regulations.

Waste from residues / unused products
Dispose of all product, residues and clean-up materials in accordance with local, state, and federal regulations.

14. TRANSPORTATION INFORMATION

DOT
Not Regulated

TDG
Not Regulated

15. REGULATORY INFORMATION

15. REGULATORY INFORMATION

State Regulations

Chemical Name	New Jersey - RTK	Pennsylvania - RTK	California Prop. 65
Nonylphenol Ethoxylate	Not Listed	Not Listed	Not Listed
Tetrapotassium Pyrophosphate	Not Listed	Not Listed	Not Listed
Potassium hydroxide	Listed	Listed	Not Listed
EDTA	Not Listed	Not Listed	Not Listed
Water	Not Listed	Not Listed	Not Listed
Sodium metasilicate	Not Listed	Not Listed	Not Listed
Amine Oxide	Not Listed	Not Listed	Not Listed
Quaternary mixture	Not Listed	Not Listed	Not Listed

International Inventories

Chemical Name	EINECS	DSL	NDSL	TSCA
Nonylphenol Ethoxylate	-	X	-	X
Tetrapotassium Pyrophosphate	X	X	-	X
Potassium hydroxide	X	X	-	X
EDTA	X	X	-	X
Water	X	X	-	X
Sodium metasilicate	X	X	-	X
Amine Oxide	X	X	-	X
Quaternary mixture	-	-	-	-

CPR
This product has been classified in accordance with the hazard criteria of the Controlled Product Regulations and the MSDS contains all of the information required by the Controlled Product Regulations

16. OTHER INFORMATION

NFPA

Health - 2
Flammability - 1
Reactivity - 0

HMIS

Health - 2
Flammability - 1
Physical Hazard - 0

Prepared By V. Shargorodsky, Regulatory Affairs Engineer

The information accumulated herein is believed to be accurate, but is not warranted to be, whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

SAFETY DATA SHEET

SDS 0045

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
Break-Out

PRODUCT CODES
73551, 73431, 73333, 73271,73361

CHEMICAL FAMILY
Organic

USE
Lubricant

HMIS CODES	
Health	1
Flammability	1
Reactivity	0
PPI	B

MANUFACTURER'S NAME
The RectorSeal Corporation
2601 Spenwick Drive
Houston, Texas 77055 USA

EMERGENCY TELEPHONE NO.
Chemtrec 24 Hours
(800)424-9300 USA
(703)527-3887 International

DATE OF VALIDATION
November 13, 2012

TECHNICAL SERVICE TELEPHONE NO.
(800)231-3345 or (713)263-8001

DATE OF PREPARATION
November 13, 2012

Section 2 -- HAZARDS IDENTIFICATION

GHS CLASSIFICATION
PHYSICAL HAZARDS: None
HEALTH HAZARDS
Acute Toxicity:
Oral: Not Classified
Dermal: Not Classified
Inhalation: Not Classified
Skin Corrosion/Irritation: Not Classified
Serious Eye Damage/Eye Irritation: Not Classified
Respiratory or Skin Sensitization: Not Classified
Germ Cell Mutagenicity: Not Classified
Carcinogenicity: Not Classified
Reproductive Toxicology: Not Classified
Target Organ Systemic Toxicity - Single Exposure: Not Classified
Target Organ Systemic Toxicity - Repeated Exposure: Not Classified
Aspiration Toxicity: Not Classified

ENVIRONMENTAL HAZARDS
Hazardous to the Aquatic Environment: Not Classified
Acute aquatic toxicity: Not Classified
Chronic aquatic toxicity: Not Classified
Bioaccumulation potential: Not Classified
Rapid degradability: Not Classified

GHS Label elements, including precautionary statements
Pictogram: None
Signal Word: None
Hazard Statements: None
Precautionary Statements:
P102 - Keep out of reach of children.
P264 - Wash hands thoroughly after handling.

SUMMARY OF ACUTE HAZARDS
Repeated contact may cause skin irritation.
ROUTE OF EXPOSURE, SIGNS AND SYMPTOMS
INHALATION
None
EYE CONTACT
Irritation, blurred vision.
SKIN CONTACT
Irritation, dermatitis, defatting.
INGESTION
Gastro-intestinal irritation, nausea, vomiting and diarrhea.
SUMMARY OF CHRONIC HAZARDS
Prolonged skin contact may result in irritation and absorption.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None known.

Section 3 -- COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT: Petroleum Oil
PERCENTAGE BY WEIGHT: 50-70
CAS#: 64741-96-4
EC#: 265-097-6

INGREDIENT: Copper Flakes
PERCENTAGE BY WEIGHT: 15 Max
CAS#: 7440-50-8
EC#: 231-159-6

Section 4 -- FIRST AID MEASURES

If INHALED:	If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.
If on SKIN:	Immediately flush with large amounts of water; use soap if available. Remove contaminated clothing.
If in EYES:	Immediately flush with large amounts of water.
If SWALLOWED:	If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL
466 F (241 C) SETA CC	N/D	N/D

EXTINGUSING MEDIA
Foam, dry chemical, carbon dioxide or water fog.
SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus (SCBA) and other protective clothing. Hazardous decomposition products possible (see Section 10).
UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Use absorbent materials to prevent footing hazard and to contain. Avoid flushing into sewers, drains, waterways, and soil. Wear protective clothing during cleanup.

Section 7 -- HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep away from heat, sparks and open flames.
OTHER PRECAUTIONS: Avoid prolonged or repeated contact with skin or clothing. Empty containers may contain residues and vapors; treat as if full and observe all product precautions. Do not reuse empty containers. KEEP OUT OF REACH OF CHILDREN.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

INGREDIENT	UNITS
Petroleum Oil	
ACGIH TLV	5 mg/m3
OSHA PEL	5 mg/m3
Copper Flakes	
ACGIH TLV	1 mg/m3
OSHA PEL	1 mg/m3

RESPIRATORY PROTECTION (SPECIFY TYPE): None required.
VENTILATION - LOCAL EXHAUST: Acceptable
SPECIAL: N/A
MECHANICAL (GENERAL): Preferable
OTHER: N/A
PROTECTIVE GLOVES: Wear rubber gloves.
EYE PROTECTION: Chemical splash goggles (ANSI Z-87.1 or equivalent)
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Coveralls recommended.
WORK/HYGIENIC PRACTICES: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area. Launder contaminated clothing before reuse.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT:	624 F (329 C) @ 760mm Hg
SPECIFIC GRAVITY (H20 = 1):	1.20
VAPOR PRESSURE (mm Hg):	0.01 @ 68 F (20 C)
MELTING POINT:	N/A
VAPOR DENSITY (AIR = 1):	<1
EVAPORATION RATE (ETHYL ACETATE = 1):	<1
APPEARANCE/ODOR:	Copper / Petroleum Odor
SOLUBILITY IN WATER:	Insoluble
FLASH POINT	466 F (241 C) SETA CC
LOWER EXPLOSION LIMIT	N/D
UPPER EXPLOSION LIMIT	N/D
VOLATILE ORGANIC COMPOUNDS(VOC)Content (Theoretical Percentage By Weight):	0% or (0 g/L)

Section 10 -- STABILITY AND REACTIVITY

STABILITY: Stable
CONDITIONS TO AVOID: Heat, sparks, open flames.
INCOMPATIBILITY (MATERIALS TO AVOID): Oxidizers, acids and bases.
HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO2, fragmented hydrocarbons.
HAZARDOUS POLYMERIZATION: Will not occur.

Section 11 -- TOXICOLOGY INFORMATION

TOXICOLOGY DATA
Ingredient Name

Petroleum Oil

Oral-Rat LD50:N/D
Inhalation-Rat LC50:N/D

Copper Flakes

Oral-Rat LD50:N/D
Oral-Rat TDLo:152 mg/kg (22W pre)

Section 12 -- Ecological Information

ECOLOGICAL DATA
Ingredient Name

Petroleum Oil

Food Chain Concentration Potential: N/D
WATERFOWL TOXICITY: N/D
BOD: N/D
AQUATIC TOXICITY: N/D

Copper Flakes

Food Chain Concentration Potential: N/D
WATERFOWL TOXICITY: N/D
BOD: N/D
AQUATIC TOXICITY: N/D

Section 13 -- DISPOSAL CONSIDERATIONS

Waste Classification: Non-regulated waste oil. Dispose of in accordance with all local, state and federal regulations.
Disposal Method: Used oil recycler

Section 14 -- TRANSPORTATION INFORMATION

DOT: Non-regulated
OCEAN (IMDG): Non-regulated
AIR (IATA): Non-regulated
WHMIS (CANADA): Non-regulated

Section 15 -- REGULATORY INFORMATION

REGULATORY DATA
Ingredient Name

Petroleum Oil

SARA 313	No
TSCA Inventory	Yes
CERCLA RQ	N/A
RCRA Code	N/A

Copper Flakes

SARA 313	Yes
TSCA Inventory	Yes
CERCLA RQ	5,000 lb.
RCRA Code	N/A

Section 16 -- OTHER INFORMATION

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). The information herein is given in good faith, but no warranty, expressed or implied is made. Consult RectorSeal for further information: (713) 263-8001

MATERIAL SAFETY DATA SHEET

MSDS 0011

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

	HMIS CODES	
PRODUCT NAME	Health	1
RectorSeal No. 5	Flammability	2
	Reactivity	0
PRODUCT CODES	PPI	B

25631, 25551, 25431, 25300, 25271, 25191, 25112, 25780, 25790

CHEMICAL FAMILY:
Organic

USE
Pipe Thread Sealant

MANUFACTURER'S NAME
The RectorSeal Corporation
2601 Spenwick Drive
Houston, Texas 77055 USA

EMERGENCY TELEPHONE NO.
Chemtrec 24 Hours
(800) 424-9300

VALIDATION DATE
February 10, 2006

TECHNICAL SERVICE TELEPHONE NO.
(800) 231-3345

REVISION DATE
February 10, 2006

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT			UNITS
20-30	123-42-2	Diacetone Alcohol			
			ACGIH TLV	50	ppm
			OSHA PEL	50	ppm

Section 3 -- HAZARDS IDENTIFICATION

SUMMARY OF ACUTE HAZARDS
Irritation to eyes, nose and throat; drowsiness, narcosis, tremors and other CNS effects at high concentration.

ROUTE OF EXPOSURE, SIGNS AND SYMPTOMS

INHALATION
Nasal and respiratory irritation, dizziness, narcosis, headache, nausea, CNS depression and unconsciousness.

EYE CONTACT
Watering, blurred vision, inflammation and irritation which can result in corneal injury.

SKIN CONTACT
Irritation, dermatitis.

INGESTION
Nausea, vomiting; CNS depression; irritation of gastrointestinal tract, liver and peritoneal wall; lung congestion.

SUMMARY OF CHRONIC HAZARDS
Skin irritation and dermatitis. Possible liver and kidney damage.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
Individuals with pre-existing or chronic diseases of the eyes, skin, respiratory system, cardiovascular system, gastrointestinal system, liver or kidneys may have increased susceptibility to excessive exposures.

Section 4 -- FIRST AID MEASURES

If INHALED: If overcome by exposure, remove victim to fresh air

immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.

If on SKIN: Wash with soap and water. If irritation occurs, seek medical attention.

If in EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

If SWALLOWED: If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL
150 F (65 C) SETA CC	N/D	N/D

EXTINGUSING MEDIA

Foam, dry chemical, carbon dioxide or water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus (SCBA) and other protective clothing. Hazardous decomposition products possible (see Section 10).

UNUSUAL FIRE AND EXPLOSION HAZARDS: Combustible - moderate flash point. Vapors heavier than air and may travel along the ground or to low spots at considerable distances to a source of ignition resulting in potential flashback. Burning liquid may float on water. Heat may build up pressure and rupture containers.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition. Use absorbent materials to prevent footing hazard and to contain. Ventilate area with natural or explosion-proof, forced air ventilation. Avoid flushing into sewers, drains, waterways, and soil. Wear protective clothing and respiratory protection during cleanup.

Section 7 -- HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep container closed and upright when not in use. Do not store near heat, sparks, or open flames.

OTHER PRECAUTIONS: Avoid prolonged or repeated contact with skin or clothing. Empty containers may contain residues; treat as if full and observe all products precautions. Do not reuse empty containers. KEEP OUT OF REACH OF CHILDREN.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION (SPECIFY TYPE): In confined poorly ventilated areas, use NIOSH/MSHA approved air purifying or supplied air purifying or supplied air respirators.

VENTILATION - LOCAL EXHAUST: Acceptable

SPECIAL: Explosion-proof equipment.

MECHANICAL (GENERAL): Preferable

OTHER: N/A

PROTECTIVE GLOVES: Wear rubber gloves.

EYE PROTECTION: Chemical splash goggles (ANSI Z-87.1 or equivalent)

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Coveralls recommended.

WORK/HYGIENIC PRACTICES: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area. Launder contaminated clothing before reuse.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT:	322 F (161 C) @ 760mm Hg
SPECIFIC GRAVITY (H20 = 1):	1.38
VAPOR PRESSURE (mm Hg):	0.3 @ 68 F (20 C)
MELTING POINT:	N/A
VAPOR DENSITY (AIR = 1):	1.1
EVAPORATION RATE (ETHYL ACETATE = 1):	0.14
APPEARANCE/ODOR:	Yellow Paste/Mild Odor
SOLUBILITY IN WATER:	23%

VOLATILE ORGANIC COMPOUNDS(VOC)Content
(Theoretical Percentage By Weight): 23% or (230 g/L)

Section 10 -- STABILITY AND REACTIVITY

STABILITY: Stable
CONDITIONS TO AVOID: Heat, sparks, open flames, and strong oxidizing. Temperatures above 500 F (260 C).
INCOMPATIBILITY (MATERIALS TO AVOID): Gaseous oxygen, strong oxidizing materials, molten alkali metals.
HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO2 and fragmented hydrocarbons.
HAZARDOUS POLYMERIZATION: Will not occur.

Section 11 -- TOXICOLOGY INFORMATION

CHRONIC HEALTH HAZARDS
No ingredients in this product is an IARC, NTP or OSHA Lister carcinogen.

TOXICOLOGY DATA
Ingredient Name

Diacetone Alcohol

Oral-Rat	LD50:4000 mg/kg
Inhalation-Human	TCLo: 100 ppm

Section 12 -- Ecological Information

ECOLOGICAL DATA
Ingredient Name

Diacetone Alcohol

Food Chain Concentration Potential	N/A
WATERFOWL TOXICITY	N/A
BOD	N/A
AQUATIC TOXICITY	N/A

Section 13 -- DISPOSAL CONSIDERATIONS

Waste Classification: Non-regulated solid waste
Disposal Method: Approved landfill
Waste from this product is not considered hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Dispose of in accordance with Federal, State, and Local regulation regarding pollution.

Section 14 -- TRANSPORTATION INFORMATION

DOT:	Non-Regulated
OCEAN (IMDG):	Non-Regulated
AIR (IATA):	Non-Regulated
WHMIS (CANADA):	Non-Regulated

Section 15 -- REGULATORY INFORMATION

REGULATORY DATA

Ingredient Name		
Diacetone Alcohol		
	SARA 313	N/A
	TSCA Inventory	Yes
	CERCLA RQ	N/A
	RCRA Code	N/A

Section 16 -- OTHER INFORMATION

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). The information herein is given in good faith, but no warranty, expressed or implied is made. Consult RectorSeal for further information: (713) 263-8001

Get the most comprehensive
MSDS/HazCom program on the market!

Material Safety Data Sheet

SECTION I - Material Identity
SECTION II - Manufacturer's Information
SECTION III - Physical/Chemical Characteristics
SECTION IV - Fire and Explosion Hazard Data
SECTION V - Reactivity Data
SECTION VI - Health Hazard Data
SECTION VII - Precautions for Safe Handling and Use
SECTION VIII - Control Measures
SECTION IX - Label Data
SECTION X - Transportation Data
SECTION XI - Site Specific/Reporting Information
SECTION XII - Ingredients/Identity Information

SECTION I - Material Identity

Item Name	
Part Number/Trade Name	RECTORSEAL NO. 5 (R) PIPE THREAD SEALANT
National Stock Number	8030002010996
CAGE Code	60150
Part Number Indicator	A
MSDS Number	191980
HAZ Code	B

SECTION II - Manufacturer's Information

Manufacturer Name	RECTORSEAL CORP
Street	2801 SPENWICK
City	HOUSTON
State	TX
Country	US
Zip Code	77055
Emergency Phone	800 424-9300 CHEMTREC
Information Phone	713 263-8001

MSDS Preparer's Information

Street	2601 SPENWICK
City	HOUSTON
State	TX
Zip Code	77055
Date MSDS Prepared/Revised	25MAR02
Active Indicator	Y

Alternate Vendors

SECTION III - Physical/Chemical Characteristics

Hazard Storage Compatibility Code	NR
NRC License Number	NR
Net Propellant Weight (Ammo)	NR
Appearance/Odor	YELLOW PASTE / MILD ODOR
Boiling Point	322 F
Melting Point	NA
Vapor Pressure	0.3
Vapor Density	1.1(AIR=1)
Specific Gravity	1.38
Decomposition Temperature	NR
Evaporation Rate	0.14 (ETHYL ACETATE)
Solubility in Water	23%
Percent Volatiles by Volume	NR
Chemical pH	NR
Corrosion Rate	NR
Container Type	F
Container Pressure Code	1
Temperature Code	4
Product State Code	S

SECTION IV - Fire and Explosion Hazard Data

Flash Point	150
Flash Point Method	SCC
Lower Explosion Limit	ND
Upper Explosion Limit	ND
Extinguishing Media	FOAM, DRY CHEMICAL, CARBON DIOXIDE, WATER FOG
Special Fire Fighting Procedures	WEAR SCBA AND FULL PROTECTIVE CLOTHING
Unusual Fire/Explosion Hazards	MODERATE FLASH POINT. VAPORS HEAVIER THAN AIR, MAY TRAVEL ALONG THE GROUND TO LOW SPOTS AT CONSIDERABLE DISTANCES TO A SOURCE OF IGNITION RESULTING IN POTNETIAL FLASHBACK.

	BURNING LIQUID MAY FLOAT ON WATER. HEAT MAY BUILD UP PRESSURE AND RUPTURE CONTAINERS

SECTION V - Reactivity Data

Stability	YES
Stability Conditions to Avoid	HEAT, SPARKS, OPEN FLAMES, STRONG OXIDIZING. TEMPS ABOVE 500 F
Materials to Avoid	GASEOUS OXYGEN, STRONG OXIDIZING MATERIALS, MOLTEN ALKALI METALS
Hazardous Decomposition Products	CO, CO2, FRAGMENTED HYDROCARBONS
Hazardous Polymerization	NO
Polymerization Conditions to Avoid	WILL NOT OCCUR
LD50 - LD50 Mixture	NR

SECTION VI - Health Hazard Data

Route of Entry: Skin	YES
Route of Entry: Ingestion	YES
Route of Entry: Inhalation	YES
Health Hazards - Acute and Chronic	[EYES] WATERING, BLURRED VISION, IRRITATION [SKIN] IRRITATION, DERMATITIS [INHAL] IRRITATION, DIZZINESS, NARCOSIS, HEADACHE, NAUSEA, CNS DEPRESSION, UNCONSCIOUSNESS [INGEST] NAUSEA, VOMITING, CNS DEPRESSION, IRRITATION, LIVER AND PERITONEAL WALL, LUNG CONGESTION
Carcinogenity: NTP	NR
Carcinogenity: IARC	NR
Carcinogenity: OSHA	NR
Explanation of Carcinogenity	NR
Symptoms of Overexposure	[EYES] WATERING, BLURRED VISION, IRRITATION [SKIN] IRRITATION, DERMATITIS [INHAL] IRRITATION, DIZZINESS, NARCOSIS, HEADACHE, NAUSEA, CNS DEPRESSION, UNCONSCIOUSNESS [INGEST] NAUSEA, VOMITING, CNS DEPRESSION, IRRITATION, LIVER AND PERITONEAL WALL, LUNG CONGESTION
Medical Cond. Aggrevated by Exposure	NR

Emergency/First Aid Procedures	[EYES] FLUSH W/ WATER FOR 15 MINUTES [SKIN] WASH W/ SOAP AND WATER, REMOVE CONTAMINATED CLOTHING, LAUNDER BEFORE REUSE [INHAL] REMOVE TO FRESH AIR [INGEST] IF CONSCIOUS, WASH OUT MOUTH WITH COPIOUS AMOUNTS OF WATER. CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY

SECTION VII - Precautions for Safe Handling and Use

Steps if Material Released/Spilled	REMOVE ALL SOURCES OF IGNITION. USE ABSORBENT MATERIALS TO PREVENT SLIPPING HAZARDS
Neutralizing Agent	NR
Waste Disposal Method	DISPOSE IAW FEDERAL,STATE, LOCAL REGULATIONS
Handling and Storage Precautions	KEEP CONTAINER CLOSED AND UPRIGHT WHEN NOT IN USE. DO NOT STORE NEAR HEAT, SPARKS OR FLAMES
Other Precautions	NR

SECTION VIII - Control Measures

Respiratory Protection	IN CONFINED AREA, USE NIOSH/MSHA AIR RESPIRATORS
Ventilation	LOCAL: ACCEPTABLE MECHANICAL: PREFERABLE
Protective Gloves	IMPERVIOUS GLOVES
Eye Protection	CHEM GOGGLES
Other Protective Equipment	NR
Work Hygenic Practices	WASH HANDS AFTER USE
Supplemental Health/Safety Data	NR
Disposal Code	O

SECTION IX - Label Data

Protect Eye	YES
Protect Skin	YES
Protect Respiratory	NO
Chronic Indicator	YES
Contact Code	SLIGHT
Fire Code	UNKNOWN
Health Code	UNKNOWN
React Code	UNKNOWN

Specific Hazard and Precaution	TARGET ORGANS: SKIN, LIVER, KIDNEY

SECTION X - Transportation Data

Container Quantity	1
Unit of Measure	PT

SECTION XI - Site Specific/Reporting Information

Volatile Organic Compounds (P/G)	3.45
Volatile Organic Compounds (G/L)	413.444

SECTION XII - Ingredients/Identity Information

Ingredient #	01
Ingredient Name	2-PENTANONE, 4-HYDROXY-4-METHYL- (20-30%)
CAS Number	123422
Proprietary	NO
Percent	30
OSHA PEL	50 PPM
ACGIH TLV	50 PPM

MATERIAL SAFETY DATA SHEET

MSDS 0022

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
Jim PR-1 or Clear PR-2

HMIS CODES	
Health	3
Flammability	3
Reactivity	1
PPI	B

PRODUCT CODES
55711, 55713, 55715, 55717, 55719, 55735, 55737, 55739

CHEMICAL FAMILY:
Organic

USE
PVC & CPVC Primer

MANUFACTURER'S NAME
The RectorSeal Corporation
2601 Spenwick Drive
Houston, Texas 77055 USA

EMERGENCY TELEPHONE NO.
Chemtrec 24 Hours
(800) 424-9300

DATE OF PREPARATION
August 3, 2005

TECHNICAL SERVICE TELEPHONE NO.
(800) 231-3345

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT			UNITS
70-90	78-93-3	Methyl Ethyl Ketone			
			ACGIH TLV	200	ppm
			OSHA PEL	200	ppm
			STEL	300	ppm
5-15	109-99-9	Tetrahydrofuran			
			ACGIH TLV	50	ppm
			OSHA PEL	200	ppm
			STEL	250	ppm
5-15	108-94-1	Cyclohexanone			
			ACGIH TLV	20	ppm (skin)
			OSHA PEL	50	ppm

Section 3 -- HAZARDS IDENTIFICATION

SUMMARY OF ACUTE HAZARDS

Overexposure may cause coughing, shortness of breath, dizziness, central nervous system depression, intoxication and collapse. It may cause irritation to the respiratory tract and to other mucous membranes.

ROUTE OF EXPOSURE, SIGNS AND SYMPTOMS

INHALATION

Overexposure may cause coughing, shortness of breath, dizziness, central nervous system depression, intoxication and collapse. It may cause irritation to the respiratory tract and to other mucous membranes.

EYE CONTACT

Severely irritating. If not removed promptly, will injure eye tissue, which can result in permanent damage.

SKIN CONTACT

Frequent or prolonged contact may irritate and cause dermatitis. Low order of toxicity.

INGESTION

Low order of toxicity. Small amounts of the liquid aspirated into the respiratory system during ingestion, or from vomiting, may cause bronchiopneumonia or pulmonary edema.

SUMMARY OF CHRONIC HAZARDS
Repeated or prolonged exposure may cause signs of central nervous system depression and respiratory irritation. This material has been shown to induce tumors in laboratory animals.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
Individuals with pre-existing or chronic diseases of the eyes, skin, respiratory system, cardiovascular system, gastrointestinal system, liver, or kidneys may have increased susceptibility to excessive exposure.

Section 4 -- FIRST AID MEASURES

If INHALED:	If overcome by exposure, remove victim to fresh air immediately. Give oxygen or artificial respiration as needed. Obtain emergency medical attention. Prompt action is essential.
If on SKIN:	Immediately flush with large amounts of water; use soap if available. Remove contaminated clothing.
If in EYES:	Immediately flush with large amounts of water for at least 15 minutes. Get prompt medical attention.
If SWALLOWED:	If swallowed, DO NOT induce vomiting. Keep at rest. Get prompt medical attention.

Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL
17 F (-8 C) SETA CC	2%	11.8%

EXTINGUSING MEDIA
Foam, dry chemical, carbon dioxide or water fog.
SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus (SCBA) and other protective clothing. Hazardous decomposition products possible (see Section 10).
UNUSUAL FIRE AND EXPLOSION HAZARDS: Extremely flammable - very low flash point. Vapors are heavier than air and may travel along ground or to low spots at considerable distance to a source of ignition resulting in potential flashback. Burning liquid may float on water. Heat may build up pressure and rupture closed containers.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Remove all sources of ignition. Use absorbent materials to prevent footing hazard and to contain. Ventilate area with natural or explosion-proof, forced air ventilation. Avoid flushing into sewers, drains, waterways, and soil. Wear protective clothing and respiratory protection during cleanup.

Section 7 -- HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep container closed and upright when not in use. Do not store near heat, sparks, or open flames. If transferring this material to other containers, ground all containers to avoid static electricity buildup and discharge which may ignite flammable vapors.
OTHER PRECAUTIONS: Avoid prolonged or repeated contact with skin or clothing. Empty containers may contain residues and vapors; treat as if full and observe all products precautions. Do not reuse empty containers. KEEP OUT OF REACH OF CHILDREN.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION (SPECIFY TYPE): In confined poorly ventilated areas,

use NIOSH/MSHA approved air purifying or supplied air purifying or supplied air respirators.
VENTILATION - LOCAL EXHAUST: Acceptable
SPECIAL: Explosion-proof equipment.
MECHANICAL (GENERAL): Preferable
OTHER: N/A
PROTECTIVE GLOVES: Wear rubber gloves.
EYE PROTECTION: Chemical splash goggles (ANSI Z-87.1 or equivalent)
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Coveralls recommended.
WORK/HYGIENIC PRACTICES: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area. Launder contaminated clothing before reuse.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT:	151 F (66 C) @ 760mm Hg
SPECIFIC GRAVITY (H20 = 1):	0.91
VAPOR PRESSURE (mm Hg):	140 @ 68 F (20 C)
MELTING POINT:	N/A
VAPOR DENSITY (AIR = 1):	2.5
EVAPORATION RATE (ETHYL ACETATE = 1):	6
APPEARANCE/ODOR:	Clear or Purple Liquid/Pungent Odor
SOLUBILITY IN WATER:	Soluble

Section 10 -- STABILITY AND REACTIVITY

STABILITY: Can form potentially explosive peroxides upon long standing in air.
CONDITIONS TO AVOID: Heat, sparks, open flames, and strong oxidizing, acidic and basic conditions.
INCOMPATIBILITY (MATERIALS TO AVOID): Oxidizers, acids and bases.
HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO2, HCl and fragmented hydrocarbons.
HAZARDOUS POLYMERIZATION: Will not occur.

Section 11 -- TOXICOLOGY INFORMATION

CHRONIC HEALTH HAZARDS
No ingredient in this product is an IARC, NTP or OSHA listed carcinogen. Tetrahydrofuran - The National Toxicology Program has reported that exposures of mice and rats to THF vapor levels up to 1800 ppm 6hr/day, 5 days/week for their lifetime caused an incidence of kidney tumors in male rats and liver tumors in female mice. The significance of these findings for human health are unclear at this time, and may be related to "species specific" effects. Elevated incidences of tumors in humans have not been reported for THF.

TOXICOLOGY DATA
Ingredient Name

Methyl Ethyl Ketone
Oral-Rat LD50:2737 mg/kg
Inhalation-Rat LC50:23,500 mg/m3/8H

Tetrahydrofuran
Oral-Rat LD50:1650 mg/kg
Inhalation-Rat LC50:21,000 ppm/3H

Cyclohexanone
Oral-Rat LD50:1535 mg/kg
Inhalation-Rat LC50:8000 ppm/4H

Section 12 -- Ecological Information

ECOLOGICAL DATA
Ingredient Name

Methyl Ethyl Ketone
Food Chain Concentration Potential: None
WATERFOWL TOXICITY: N/A
BOD: 214%
AQUATIC TOXICITY: 5640 mg/l/48 hr/bluegill/TLm/fresh water

Tetrahydrofuran
Food Chain Concentration Potential: None
WATERFOWL TOXICITY: N/A
BOD: N/A
AQUATIC TOXICITY: N/A

Cyclohexanone
Food Chain Concentration Potential: None
WATERFOWL TOXICITY: N/A
BOD: N/A
AQUATIC TOXICITY: N/A

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Section 13 -- DISPOSAL CONSIDERATIONS

Waste Classification: RCRA classified hazardous waste. Dispose of absorbed materials and liquid waste in approved, controlled incineration facility in accordance with all local, state and federal regulations.

Disposal Method: Incineration

==========

Section 14 -- TRANSPORTATION INFORMATION

DOT: Adhesives, Class 3, UN 1133, PG II, ERG#127.
Quarts and less: Consumer Commodity, ORM-D

OCEAN (IMDG): Adhesives, Class 3, UN 1133, PG II, IMDG#3174, EMS#3-05, MFAG#330
Quarts and less: Adhesives, Class 3, UN 1133, PG II, Limited Quantities or Ltd Qty

AIR (IATA): Adhesives, Class 3, UN 1133, PG II, ERG#127

WHMIS (CANADA): Class B-2

==========

Section 15 -- REGULATORY INFORMATION

REGULATORY DATA
Ingredient Name

Methyl Ethyl Ketone

SARA 313	Yes
TSCA Inventory	Yes
CERCLA RQ	5,000 lb.
RCRA Code	U159

Tetrahydrofuran

SARA 313	No
TSCA Inventory	Yes
CERCLA RQ	1,000 lb.
RCRA Code	U213

Cyclohexanone

SARA 313	No
TSCA Inventory	Yes
CERCLA RQ	5,000 lb.
RCRA Code	U057

==========

Section 16 -- OTHER INFORMATION

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SAFETY DATA SHEET

SDS 0077

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
RectorSeal T Plus 2

HMIS CODES	
Health	1
Flammability	1
Reactivity	0
PPI	B

PRODUCT CODES
23112, 23191, 23271, 23391, 23431, 23551, 23552, 23631, 23633, 23710, 23714

CHEMICAL FAMILY:
Organic

USE
Pipe Thread Sealant

MANUFACTURER'S NAME
The RectorSeal Corporation
2601 Spenwick Drive
Houston, Texas 77055 USA

EMERGENCY TELEPHONE NO.
Chemtrec 24 Hours
(800)424-9300 USA
(703)527-3887 International

DATE OF VALIDATION
January 23, 2015

TECHNICAL SERVICE TELEPHONE NO.
(800)231-3345 or (713)263-8001

DATE OF PREPARATION
May 30, 2013

Section 2 -- HAZARDS IDENTIFICATION

GHS CLASSIFICATION
PHYSICAL HAZARDS: None
HEALTH HAZARDS
Acute Toxicity:
Oral: Not Classified
Dermal: Not Classified
Inhalation: Not Classified
Skin Corrosion/Irritation: Not Classified
Serious Eye Damage/Eye Irritation: Not Classified
Respiratory or Skin Sensitization: Not Classified
Germ Cell Mutagenicity: Not Classified
Carcinogenicity: Not Classified
Reproductive Toxicology: Not Classified
Target Organ Systemic Toxicity - Single Exposure: Not Classified
Target Organ Systemic Toxicity - Repeated Exposure: Not Classified
Aspiration Toxicity: Not Classified

ENVIRONMENTAL HAZARDS
Hazardous to the Aquatic Environment: Not Classified
Acute aquatic toxicity: Not Classified
Chronic aquatic toxicity: Not Classified
Bioaccumulation potential: Not Classified
Rapid degradability: Not Classified

GHS Label elements, including precautionary statements
Pictogram: None
Signal Word: None
Hazard Statements: None
Precautionary Statements:
P102 - Keep out of reach of children.
P264 - Wash hands thoroughly after handling.

May produce slight to moderate skin and eye irritation.

ROUTE OF EXPOSURE, SIGNS AND SYMPTOMS

INHALATION

None known.

EYE CONTACT

Irritation, watering may occur.

SKIN CONTACT

Frequent or prolonged contact may irritate and cause dermatitis.

INGESTION

May cause nausea and vomiting. Not expected to produce toxic effects unless large amounts are ingested.

SUMMARY OF CHRONIC HAZARDS

None known.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Individuals with pre-existing or chronic diseases of the eyes, skin or persons with chemical sensitivity may have increased susceptibility to excessive exposures.

==========

Section 3 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS
None as defined by OSHA Hazard Communication Standard 29 CFR 1910.1200.			

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Section 4 -- FIRST AID MEASURES

If INHALED:	N/A
If on SKIN:	Wash with soap and water. Seek medical attention if irritation persists.
If in EYES:	Flush with large amounts of water. Get medical attention if irritation persists.
If SWALLOWED:	If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

==========

Section 5 -- FIRE FIGHTING MEASURES

EXTINGUSING MEDIA

Foam, dry chemical, carbon dioxide or water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus (SCBA) and other protective clothing. Hazardous decomposition products possible (see Section 10).

UNUSUAL FIRE AND EXPLOSION HAZARDS: Heat may build up pressure and rupture closed containers. Above 500 F (260 C) the fumes are acutely toxic.

==========

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wipe or scrape up spilled material to prevent footing hazard and place in trash.

==========

Section 7 -- HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep container closed and upright when not in use.

OTHER PRECAUTIONS: Avoid prolonged or repeated contact with skin or clothing. Empty containers may contain residues; treat as if full and observe all products precautions. Do not reuse empty containers.

KEEP OUT OF REACH OF CHILDREN.

==========

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION (SPECIFY TYPE): None required.
VENTILATION - LOCAL EXHAUST: N/A
SPECIAL: N/A
MECHANICAL (GENERAL): N/A
OTHER: N/A
PROTECTIVE GLOVES: Wear rubber gloves.
EYE PROTECTION: Chemical splash goggles (ANSI Z-87.1 or equivalent)
OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Coveralls recommended.
WORK/HYGIENIC PRACTICES: Where use can result in skin contact, wash exposed areas thoroughly before eating, drinking, smoking, or leaving work area. Launder contaminated clothing before reuse.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT:	N/D
SPECIFIC GRAVITY (H20 = 1):	1.32
VAPOR PRESSURE (mm Hg):	< 1 @ 77 F (25 C)
MELTING POINT:	N/A
VAPOR DENSITY (AIR = 1):	N/A
EVAPORATION RATE (ETHYL ACETATE = 1):	N/A
APPEARANCE/ODOR:	White Paste/Slight Odor
SOLUBILITY IN WATER:	Negligible
VOLATILE ORGANIC COMPOUNDS(VOC)Content (Theoretical Percentage By Weight):	0% or (0 g/L)
FLASH POINT	>300 F (149 C) SETA CC
LOWER EXPLOSION LIMIT	N/D
UPPER EXPLOSION LIMIT	N/D

Section 10 -- STABILITY AND REACTIVITY

STABILITY: Stable
CONDITIONS TO AVOID: None known.
INCOMPATIBILITY (MATERIALS TO AVOID): Gaseous oxygen and strong oxidizing materials.
HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO2 and fragmented hydrocarbons.
HAZARDOUS POLYMERIZATION: Will not occur.

Section 11 -- TOXICOLOGY INFORMATION

CHRONIC HEALTH HAZARDS
No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

TOXICOLOGY DATA
Ingredient Name

Oral-Rat	LD50: N/A
Inhalation-Rat	LC50: N/A

Section 12 -- Ecological Information

ECOLOGICAL DATA
Ingredient Name

Food Chain Concentration Potential	N/A
WATERFOWL TOXICITY	N/A
BOD	N/A
AQUATIC TOXICITY	N/A

Section 13 -- DISPOSAL CONSIDERATIONS

Waste Classification: Non-regulated solid waste
Disposal Method: Approved landfill
Waste from this product is not considered hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Dispose of in accordance with Federal, State, and Local regulation regarding pollution.

Section 14 -- TRANSPORTATION INFORMATION

DOT:	Non-Regulated
OCEAN (IMDG):	Non-Regulated
AIR (IATA):	Non-Regulated
WHMIS (CANADA):	Non-Regulated

Section 15 -- REGULATORY INFORMATION

REGULATORY DATA
Ingredient Name

SARA 313	N/A
TSCA Inventory	All components listed
CERCLA RQ	N/A
RCRA Code	N/A

Section 16 -- OTHER INFORMATION

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). The information herein is given in good faith, but no warranty, expressed or implied is made. Consult RectorSeal for further information: (713) 263-8001

Rec'd 10.18.05

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

00641-all except:
-2009
-3009

00735-0129

ColArt Fine Art & Graphics Ltd
Whitefriars Avenue
Harrow
Middlesex HA3 5RH
England

Tel : +44 (0) 181 427 4343

SAFETY DATA SHEET

PRODUCT NAME : Reeves Acrylic Colour

PRODUCT CODE : RAC

2 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Cas No.	EC No.	Weight%	Symbols	R Phrases
35% ammonium hydroxide solution	0001336-21-6	215-647-6	< 0.5	Xi	34,37

3 HAZARDS IDENTIFICATION

- Low hazard expected under normal conditions of use
- Irritating to eyes and respiratory system (R36/37)

4 FIRST-AID MEASURES

CONTACT WITH SKIN

- After contact with skin, wash immediately with plenty of soap and water (S28)
- Do not use solvents to clean skin

CONTACT WITH EYES

- Irrigate eyes thoroughly whilst lifting eyelids
- Seek medical attention if irritation persists

INGESTION

- Rinse mouth with water (do not swallow)
- Give plenty of water to drink
- Seek medical advice

Item Numbers 00641-0012, 00641-0018, 00641-0029, 00641-0069, 00641-1001, 00641-1002, 00641-1009, 00641-1021, 00641-1029, 00641-1449, 00641-2041, 00641-2551, 00641-3281, 00641-3501, 00641-3721, 00641-3731, 00641-4021, 00641-4041, 00641-4061, 00641-4321, 00641-4511, 00641-5161, 00641-5191, 00641-5231, 00641-6511, 00641-7011, 00641-7191, 00641-7651, 00641-8041, 00641-8051, 00641-8071, 00641-9011, 00641-9331

4 FIRST-AID MEASURES

INHALATION

- Remove patient to fresh air
- Keep warm and at rest
- Seek medical attention if ill effects occur

OTHER INFORMATION

- When in doubt or symptoms persist, seek medical attention

5 FIRE-FIGHTING MEASURES

- May give off noxious and toxic fumes in a fire
- Not flammable. In case of fire use extinguishing media appropriate to surrounding conditions
- Not flammable but will support combustion

6 ACCIDENTAL RELEASE MEASURES

- Do not allow to enter public sewers and watercourses
- If contamination of drainage systems or water courses is unavoidable, immediately inform appropriate authorities
- Absorb spillage in suitable inert material
- Place in appropriate container

7.1 HANDLING

- When using do not eat, drink or smoke (S20/21)
- Ensure adequate ventilation
- Do not breathe vapour (S23)
- See Section 8

7.2 STORAGE

- Store at ambient temperature
- Store above 5 deg C
- Opened containers should be carefully resealed and stored in an upright position

8.1 EXPOSURE CONTROLS/PERSONAL PROTECTION

- Wear suitable protective clothing (S36)
- Use good personal hygiene practices
- No special ventilation is required unless the product is used in a spray form

8.2 EXPOSURE LIMITS

Item Number: 00641-0001, 00641-0018, 00641-0029, 00641-0069, 00641-1001, 00641-1002, 00641-1009, 00641-1021, 00641-1029, 00641-1449, 00641-2041, 00641-2551, 00641-3281, 00641-3501, 00641-3721, 00641-3731, 00641-4621, 00641-4041, 00641-4061, 00641-4321, 00641-4511, 00641-5161, 00641-5191, 00641-5231, 00641-6511, 00641-7011, 00641-7191, 00641-7651, 00641-8041, 00641-8051, 00641-8071, 00641-9011, 00641-9331

Constituent Exposure Limit:

35% ammonium hydroxide solution

- OES / LTEL 25 ppm
- OES / STEL 35 ppm

9 PHYSICAL AND CHEMICAL PROPERTIES

- Liquid, coloured, paste, miscible with water
- ammonia odour
- Non-flammable
- Boiling point >100 deg C
- Flash point - not applicable
- Melting point - not known
- Auto-ignition point - not applicable
- pH 9-10
- Density 1.20-1.50 kg/m3
- Vapour pressure 17 mm Hg
- Dispersible

10 STABILITY AND REACTIVITY

- Stable
- Miscible with water
- No hazardous reactions known if used for its intended purpose
- Avoid overheating
- Decomposition products may include nitrogen oxides

11 TOXICOLOGICAL INFORMATION

- No experimental data available
- Mildly irritating to skin and eyes
- Vapours or aerosols may cause irritation of eyes, nose and respiratory tract

12 ECOLOGICAL INFORMATION

- No information available
- However, similar materials are not classified as harmful to aquatic life

13 DISPOSAL CONSIDERATIONS

- Do not empty into drains (S29)
- Disposal should be in accordance with local, state or national legislation

Item Numbers: 00641-0012, 00641-0018, 00641-0029, 00641-0069, 00641-1001, 00641-1002, 00641-1009, 00641-1021, 00641-1029, 00641-1449, 00641-2041, 00641-2551, 00641-3281, 00641-3501, 00641-3721, 00641-3731, 00641-4021, 00641-4041, 00641-4061, 00641-4321, 00641-4511, 00641-5161, 00641-5191, 00641-5231, 00641-6511, 00641-7011, 00641-7191, 00641-7651, 00641-8041, 00641-8051, 00641-8071, 00641-9011, 00641-9331

14.1 TRANSPORT REGULATIONS

PROPER SHIPPING NAME:

Non hazardous

NOT APPLICABLE

14.2 TRANSPORT INFORMATION

- Not classified as hazardous for transport

15 REGULATORY INFORMATION

- Not hazardous according to current Dangerous Preparations Directive (88/379/EEC) Regulations
- This Safety Data Sheet does not constitute a workplace risk assessment
- The data given here is based on current knowledge and experience. This Safety Data Sheet describes the product in terms of safety requirements and does not signify any warranty with regard to the product's properties
- The data given here only applies when product used for proper application(s). The product is not sold as suitable for other applications - usage in such may cause risks not mentioned in this sheet. Do not use for other application(s) without seeking advice from manufacturer.

15.1 RISK PHRASES

- None assigned

15.2 SAFETY PHRASES

- None assigned

16 OTHER INFORMATION

Item Numbers: 00641-0012, 00641-0018, 00641-0029, 00641-0069, 00641-1001, 00641-1002, 00641-1009, 00641-1021, 00641-1029, 00641-1449, 00641-2041, 00641-2551, 00641-3281, 00641-3501, 00641-3721, 00641-3731, 00641-4021, 00641-4041, 00641-4061, 00641-4321, 00641-4511, 00641-5161, 00641-5191, 00641-5231, 00641-6511, 00641-7011, 00641-7191, 00641-7651, 00641-8041, 00641-8051, 00641-8071, 00641-9011, 00641-9331

NATIONAL REFRIGERANTS, INC.

R-22

Safety Data Sheet

R-22

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: R-22
OTHER NAME: Chlorodifluoromethane
USE: Refrigerant Gas
DISTRIBUTOR: National Refrigerants, Inc.
661 Kenyon Avenue
Bridgeton, New Jersey 08302

FOR MORE INFORMATION CALL:
(Monday-Friday, 8:00am-5:00pm)
1-800-262-0012

IN CASE OF EMERGENCY CALL:
CHEMTREC: 1-800-424-9300

2. HAZARDS IDENTIFICATION

CLASSIFICATION: **Gases under pressure, Liquefied Gas**
SIGNAL WORD: **WARNING**
HAZARD STATEMENT: **Contains gas under pressure, may explode if heated**
SYMBOL: **Gas Cylinder**
PRECAUTIONARY STATEMENT: **STORAGE: Protect from sunlight, store in a well ventilated place**

EMERGENCY OVERVIEW: Colorless, volatile liquid with ethereal and faint sweetish odor. Non-flammable material. Overexposure may cause dizziness and loss of concentration. At higher levels, CNS depression and cardiac arrhythmia may result from exposure. Vapors displace air and can cause asphyxiation in confined spaces. At higher temperatures, (>250°C), decomposition products may include Hydrochloric Acid (HCI), Hydrofluoric Acid (HF) and carbonyl halides.

POTENTIAL HEALTH HAZARDS

SKIN: Irritation would result from a defatting action on tissue. Liquid contact could cause frostbite.

EYES: Liquid contact can cause severe irritation and frostbite. Mist may irritate.

INHALATION: R-22 is low in acute toxicity in animals. When oxygen levels in air are reduced to 12-14% by displacement, symptoms of asphyxiation, loss of coordination, increased pulse rate and deeper respiration will occur. At high levels, cardiac arrhythmia may occur.

INGESTION: Ingestion is unlikely because of the low boiling point of the material. Should it occur, discomfort in the gastrointestinal tract from rapid evaporation of the material and consequent evolution of gas would result.
Some effects of inhalation and skin exposure would be expected.

DELAYED EFFECTS: None Known

Ingredients found on one of the OSHA designated carcinogen lists are listed below.

INGREDIENT NAME	NTP STATUS	IARC STATUS	OSHA LIST
No ingredients listed in this section			

3. COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT NAME	CAS NUMBER	WEIGHT %
Chlorodifluoromethane	75-45-6	100

COMMON NAME and SYNONYMS
R-22; HCFC-22

There are no impurities or stabilizers that contribute to the classification of the material identified in Section 2

4. FIRST AID MEASURES

SKIN: Promptly flush skin with water until all chemical is removed. If there is evidence of frostbite, bathe (do not rub) with lukewarm (not hot) water. If water is not available, cover with a clean, soft cloth or similar covering. Get medical attention if symptoms persist.

EYES: Immediately flush eyes with large amounts of water for at least 15 minutes (in case of frostbite, water should be lukewarm, not hot) lifting eyelids occasionally to facilitate irrigation. Get medical attention if symptoms persist.

INHALATION: Immediately remove to fresh air. If breathing has stopped, give artificial respiration. Use oxygen as required, provided a qualified operator is available. Get medical attention immediately. DO NOT give epinephrine (adrenaline).

INGESTION: Ingestion is unlikely because of the physical properties and is not expected to be hazardous. DO NOT induce vomiting unless instructed to do so by a physician.

ADVICE TO PHYSICIAN: Because of the possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, should be used with special caution and only in situations of emergency life support. Treatment of overexposure should be directed at the control of symptoms and the clinical conditions.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: Gas, not applicable per DOT regulations
FLASH POINT METHOD: Not applicable
AUTOIGNITION TEMPERATURE: Unknown
UPPER FLAME LIMIT (volume % in air): None*
LOWER FLAME LIMIT (volume % in air): None*
*Based on ASHRAE Standard 34 with match ignition
FLAME PROPAGATION RATE (solids): Not applicable
OSHA FLAMMABILITY CLASS: Not applicable

EXTINGUISHING MEDIA:

Use any standard agent – choose the one most appropriate for type of surrounding fire (material itself is not flammable)

UNUSUAL FIRE AND EXPLOSION HAZARDS:

R-22 is not flammable at ambient temperatures and atmospheric pressure. However, this material will become combustible when mixed with air under pressure and exposed to strong ignition sources.
Contact with certain reactive metals may result in formation of explosive or exothermic reactions under specific conditions (e.g. very high temperatures and/or appropriate pressures).

SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS:

Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool.

6. ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR OTHER RELEASE: (Always wear recommended personal protective equipment.)

Evacuate unprotected personnel. Product dissipates upon release. Protected personnel should remove ignition sources and shut off leak, if without risk, and provide ventilation. Unprotected personnel should not return to the affected area until air has been tested and determined safe, including low-lying areas.

Spills and releases may have to be reported to Federal and/or local authorities. See Section 15 regarding reporting requirements.

7. HANDLING AND STORAGE

NORMAL HANDLING: (Always wear recommended personal protective equipment.)

Avoid breathing vapors and liquid contact with eyes, skin or clothing. Do not puncture or drop cylinders, expose them to open flame or excessive heat. Use authorized cylinders only. Follow standard safety precautions for handling and use of compressed gas cylinders.

R-22 should not be mixed with air above atmospheric pressure for leak testing or any other purpose. See Section 5: Unusual Fire and Explosion Hazards

STORAGE RECOMMENDATIONS:

Store in a cool, well-ventilated area of low fire risk and out of direct sunlight. Protect cylinder and its fittings from physical damage. Storage in subsurface locations should be avoided. Close valve tightly after use and when empty.

INCOMPATIBILITIES:

Freshly abraded aluminum surfaces at specific temperatures and pressures may cause a strong exothermic reaction.
Chemically reactive metals: potassium, calcium, powdered aluminum, magnesium, and zinc.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide local ventilation at filling zones and areas where leakage is probable. Mechanical (general) ventilation may be adequate for other operating and storage areas.

PERSONAL PROTECTIVE EQUIPMENT

SKIN PROTECTION:

Skin contact with refrigerant may cause frostbite. General work clothing and gloves (leather) should provide adequate protection. If prolonged contact with liquid or gas is anticipated, insulated gloves constructed of PVA, neoprene or butyl rubber should be used. Any contaminated clothing should be promptly removed and washed before reuse.

EYE PROTECTION:

For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear chemical safety goggles.

RESPIRATORY PROTECTION:

None generally required for adequately ventilated work situations. For accidental release or non-ventilated situations, or release into confined space, where the concentration may be above the PEL of 1,000 ppm, use a self-contained, NIOSH approved breathing apparatus or supplied air respirator. For escape: use the former or a NIOSH approved gas mask with organic vapor canister.

ADDITIONAL RECOMMENDATIONS:

Where contact with liquid is likely, such as in a spill or leak, impervious boots and clothing should be worn. High dose-level warning signs are recommended for areas of principle exposure. Provide eyewash stations and quick-drench shower facilities at convenient locations. For tank cleaning operations, see OSHA regulations, 29 CFR 1910.132 and 29 CFR 1910.133.

EXPOSURE GUIDELINES

INGREDIENT NAME	ACGIH TLV	OSHA PEL	OTHER LIMIT
Chlorodifluoromethane	1000 ppm TWA (8hr)	1000 ppm TWA (8hr)	None

OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS:

Hydrogen Fluoride: ACGIH TLV = 2ppm ceiling, 0.5ppm TLV-TWA

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear, colorless liquid and vapor
PHYSICAL STATE:	Gas at ambient temperatures
MOLECULAR WEIGHT:	86.45
CHEMICAL FORMULA:	$CHC1F_2$
ODOR:	Faint ethereal odor
SPECIFIC GRAVITY (water = 1.0):	1.21 @ 21.1°C (70°F)
SOLUBILITY IN WATER (weight %):	0.3 wt% @ 25°C and 1 atmosphere
pH:	Neutral
BOILING POINT:	-40.8°C (-41.40°F)
FREEZING POINT:	-160°C (-256°F)
VAPOR PRESSURE:	136.1 psia @ 70°F 311.4 psia @ 130°F
VAPOR DENSITY (air = 1.0):	3.0
EVAPORATION RATE:	>1 **COMPARED TO:** $CC1_4$ = 1
% VOLATILES:	100
ODOR THRESHHOLD:	Not established

FLAMMABILITY: Not applicable
LEL/UEL: None/None
RELATIVE DENSITY: 1.21 g/cm3 at 21.1 C
PARTITION COEFF (n-octanol/water) Log Pow: 1.08-1.13. Note: This product is more soluble than octanol
AUTO IGNITION TEMP: Not Determined
DECOMPOSITION TEMPERATURE: >250 ˚C
VISCOSITY: Not applicable
FLASH POINT: Not applicable
(Flash point method and additional flammability data are found in Section 5.)

10. STABILITY AND REACTIVITY

NORMALLY STABLE: (CONDITIONS TO AVOID):

The product is stable.
Do not mix with oxygen or air above atmospheric pressure. Any source of high temperatures, such as lighted cigarettes, flames, hot spots or welding may yield toxic and/or corrosive decomposition products.

INCOMPATIBILITIES:

(Under specific conditions: e.g. very high temperatures and/or appropriate pressures) – Freshly abraded aluminum surfaces (may cause strong exothermic reaction). Chemically reactive metals: potassium, calcium, powdered aluminum, magnesium, and zinc.

HAZARDOUS DECOMPOSITION PRODUCTS:

Halogens, halogen acids and possibly carbonyl halides.

HAZARDOUS POLYMERIZATION:

Will not occur.

11. TOXICOLOGICAL INFORMATION

IMMEDIATE (ACUTE) EFFECTS:

LC_{50} : Inhalation 4 hr. (rat) - $\geq$ 300,000 ppm / Cardiac Sensitization threshold (dog) - 50,000 ppm

DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS:

Subchronic inhalation (rat) NOEL – 10,000 ppm
Not mutagenic in *in-vitro* or *in-vivo* tests
Not teratogenic

REPEATED DOSE TOXICITY:

Lifetime inhalation exposure of male rats was associated with a small increase in salivary gland fibrosarcomas.

FURTHER INFORMATION:

Acute effects of rapid evaporation of the liquid may cause frostbite. Vapors are heavier than air and can displace oxygen causing difficulty breathing or suffocation. May cause cardiac arrhythmia.

.

12. ECOLOGICAL INFORMATION

Degradability (BOD): R-22 is a gas at room temperature; therefore, it is unlikely to remain in water.

Octanol Water Partition Coefficient: See Section 9

13. DISPOSAL CONSIDERATIONS

RCRA

Is the unused product a RCRA hazardous waste if discarded? Not a hazardous waste
If yes, the RCRA ID number is: Not applicable

OTHER DISPOSAL CONSIDERATIONS:
Disposal must comply with federal, state, and local disposal or discharge laws. R-22 is subject to U.S. Environmental Protection Agency Clean Air Act Regulations Section 608 in 40 CFR Part 82 regarding refrigerant recycling.

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

14. TRANSPORT INFORMATION

US DOT ID NUMBER: UN1018
US DOT PROPER SHIPPING NAME: Chlorodifluoromethane or Refrigerant gas R 22
US DOT HAZARD CLASS: 2.2
US DOT PACKING GROUP: Not applicable

For additional information on shipping regulations affecting this material, contact the information number found in Section 1.

15. REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (TSCA)
TSCA INVENTORY STATUS: Listed on the TSCA inventory
OTHER TSCA ISSUES: None

SARA TITLE III / CERCLA
"Reportable Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs) exist for the following ingredients.

INGREDIENT NAME	SARA / CERCLA RQ (lb.)	SARA EHS TPQ (lb.)
No ingredients listed in this section		

Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center [(800) 424-8802] and to your Local Emergency Planning Committee.

SECTION 311 HAZARD CLASS: IMMEDIATE PRESSURE

SARA 313 TOXIC CHEMICALS:
The following ingredients are SARA 313 "Toxic Chemicals". CAS numbers and weight percents are found in Section 2.

INGREDIENT NAME	COMMENT
Chlorodifluoromethane (HCFC-22)	None

STATE RIGHT-TO-KNOW

In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

INGREDIENT NAME	WEIGHT %	COMMENT
No ingredients listed in this section		

ADDITIONAL REGULATORY INFORMATION:

R-22 is subject to U.S. Environmental Protection Agency Clean Air Act Regulations at 40 CFR Part 82.

WARNING: DO NOT vent to the atmosphere. To comply with provisions of the U.S. Clean Air Act, any residual must be recovered. **Contains Chlorodifluoromethane ,** an HCFC substance which harms public health and the environment by destroying ozone in the upper atmosphere. Destruction of the ozone layer can lead to increased ultraviolet radiation which, with excess exposure to sunlight, can lead to an increase in skin cancer and eye cataracts.

WHMIS CLASSIFICATION (CANADA):

This product has been evaluated in accordance with the hazard criteria of the CPR and the SDS contains all the information required by the CPR.

FOREIGN INVENTORY STATUS:

Canada – Listed on DSL
EU - EINECS # 2008719

16. OTHER INFORMATION

CURRENT ISSUE DATE: April, 2015
PREVIOUS ISSUE DATE: November, 2012

OTHER INFORMATION:

HMIS Classification: Health – 1, Flammability – 1, Reactivity – 0
NFPA Classification: Health – 2, Flammability – 1, Reactivity – 0
ANSI/ASHRAE 34 Safety Group – A1
UL Classified

Regulatory Standards:

1. OSHA regulations for compressed gases: 29 CFR 1910.101
2. DOT classification per 49 CFR 172.101
3. Clean Air Act Class II Substance

DISCLAIMER:

National Refrigerants, Inc. believes that the information and recommendations contained herein (including data and statements are accurate as of the date hereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be valid where such product is used in combination with any other methods of use of the product and of the information referred to herein are beyond the control of National Refrigerants. National Refrigerants expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.

Material Safety Data Sheet

R-134A

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: R-134A
DISTRIBUTOR: National Refrigerants, Inc.
661 Kenyon Avenue
Bridgeton, New Jersey 08302

FOR MORE INFORMATION CALL:
(Monday-Friday, 8:00am-5:00pm)
1-800-262-0012

IN CASE OF EMERGENCY CALL:
CHEMTREC: 1-800-424-9300

2. COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT NAME	CAS NUMBER	WEIGHT %
1,1,1,2-Tetrafluoroethane	811-97-2	100

Trace impurities and additional material names not listed above may also appear in Section 15 toward the end of the MSDS. These materials may be listed for local "Right-To-Know" compliance and for other reasons.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Colorless, volatile liquid with ethereal and faint sweetish odor. Non-flammable material. Overexposure may cause dizziness and loss of concentration. At higher levels, CNS depression and cardiac arrhythmia may result from exposure. Vapors displace air and can cause asphyxiation in confined spaces. At higher temperatures, (>250°C), decomposition products may include Hydrofluoric Acid (HF) and carbonyl halides.

POTENTIAL HEALTH HAZARDS

SKIN: Irritation would result from a defatting action on tissue. Liquid contact could cause frostbite.

EYES: Liquid contact can cause severe irritation and frostbite. Mist may irritate.

INHALATION: R-134A is low in acute toxicity in animals. When oxygen levels in air are reduced to 12-14% by displacement, symptoms of asphyxiation, loss of coordination, increased pulse rate and deeper respiration will occur. At high levels, cardiac arrhythmia may occur.

INGESTION: Ingestion is unlikely because of the low boiling point of the material. Should it occur, discomfort in the gastrointestinal tract from rapid evaporation of the material and consequent evolution of gas would result. Some effects of inhalation and skin exposure would be expected.

DELAYED EFFECTS: None Known

Ingredients found on one of the OSHA designated carcinogen lists are listed below.

INGREDIENT NAME	NTP STATUS	IARC STATUS	OSHA LIST
No ingredients listed in this section			

4. FIRST AID MEASURES

SKIN: Promptly flush skin with water until all chemical is removed. If there is evidence of frostbite, bathe (do not rub) with lukewarm (not hot) water. If water is not available, cover with a clean, soft cloth or similar covering. Get medical attention if symptoms persist.

EYES: Immediately flush eyes with large amounts of water for at least 15 minutes (in case of frostbite, water should be lukewarm, not hot) lifting eyelids occasionally to facilitate irrigation. Get medical attention if symptoms persist.

INHALATION: Immediately remove to fresh air. If breathing has stopped, give artificial respiration. Use oxygen as required, provided a qualified operator is available. Get medical attention immediately. DO NOT give epinephrine (adrenaline).

INGESTION: Ingestion is unlikely because of the physical properties and is not expected to be hazardous. DO NOT induce vomiting unless instructed to do so by a physician.

ADVICE TO PHYSICIAN: Because of the possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, should be used with special caution and only in situations of emergency life support. Treatment of overexposure should be directed at the control of symptoms and the clinical conditions.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT:	Gas, not applicable per DOT regulations
FLASH POINT METHOD:	Not applicable
AUTOIGNITION TEMPERATURE:	>750°C
UPPER FLAME LIMIT (volume % in air):	None*
LOWER FLAME LIMIT (volume % in air):	None*
	*Based on ASHRAE Standard 34 with match ignition
FLAME PROPAGATION RATE (solids):	Not applicable
OSHA FLAMMABILITY CLASS:	Not applicable

EXTINGUISHING MEDIA:

Use any standard agent – choose the one most appropriate for type of surrounding fire (material itself is not flammable)

UNUSUAL FIRE AND EXPLOSION HAZARDS:

R-134A is not flammable at ambient temperatures and atmospheric pressure. However, this material will become combustible when mixed with air under pressure and exposed to strong ignition sources.
Contact with certain reactive metals may result in formation of explosive or exothermic reactions under specific conditions (e.g. very high temperatures and/or appropriate pressures).

SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS:

Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool.

6. ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR OTHER RELEASE: (Always wear recommended personal protective equipment.)

Evacuate unprotected personnel. Protected personnel should remove ignition sources and shut off leak, if without risk, and provide ventilation. Unprotected personnel should not return until air has been tested and determined safe, including low-lying areas.

Spills and releases may have to be reported to Federal and/or local authorities. See Section 15 regarding reporting requirements.

7. HANDLING AND STORAGE

NORMAL HANDLING: (Always wear recommended personal protective equipment.)

Avoid breathing vapors and liquid contact with eyes, skin or clothing. Do not puncture or drop cylinders, expose them to open flame or excessive heat. Use authorized cylinders only. Follow standard safety precautions for handling and use of compressed gas cylinders.

R-134A should not be mixed with air above atmospheric pressure for leak testing or any other purpose.

STORAGE RECOMMENDATIONS:

Store in a cool, well-ventilated area of low fire risk and out of direct sunlight. Protect cylinder and its fittings from physical damage. Storage in subsurface locations should be avoided. Close valve tightly after use and when empty.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide local ventilation at filling zones and areas where leakage is probable. Mechanical (general) ventilation may be adequate for other operating and storage areas.

PERSONAL PROTECTIVE EQUIPMENT

SKIN PROTECTION:

Skin contact with refrigerant may cause frostbite. General work clothing and gloves (leather) should provide adequate protection. If prolonged contact with liquid or gas is anticipated, insulated gloves constructed of PVA, neoprene or butyl rubber should be used. Any contaminated clothing should be promptly removed and washed before reuse.

EYE PROTECTION:

For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear chemical safety goggles.

RESPIRATORY PROTECTION:

None generally required for adequately ventilated work situations. For accidental release or non-ventilated situations, or release into confined space, where the concentration may be above the PEL of 1,000 ppm, use a self-contained, NIOSH approved breathing apparatus or supplied air respirator. For escape: use the former or a NIOSH approved gas mask with organic vapor canister.

ADDITIONAL RECOMMENDATIONS:

Where contact with liquid is likely, such as in a spill or leak, impervious boots and clothing should be worn. High dose-level warning signs are recommended for areas of principle exposure. Provide eyewash stations and quick-drench shower facilities at convenient locations. For tank cleaning operations, see OSHA regulations, 29 CFR 1910.132 and 29 CFR 1910.133.

EXPOSURE GUIDELINES

INGREDIENT NAME	ACGIH TLV	OSHA PEL	OTHER LIMIT
1,1,1,2-Tetrafluoroethane	None	None	*1000 ppm TWA (8hr) **1000 ppm TWA (8hr)

* = Limit established by National Refrigerants, Inc.
** = Workplace Environmental Exposure Level (AIHA)
*** = Biological Exposure Index (ACGIH)

OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS:

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear, colorless liquid and vapor
PHYSICAL STATE:	Gas at ambient temperatures
MOLECULAR WEIGHT:	102
CHEMICAL FORMULA:	F_3CCH_2F
ODOR:	Faint ethereal odor
SPECIFIC GRAVITY (water = 1.0):	<1.22
SOLUBILITY IN WATER (weight %):	0.15 wt%
pH:	Neutral
BOILING POINT:	-26.2°C (-15.1°F)
FREEZING POINT:	-92.5°C (-141.9°F)
VAPOR PRESSURE:	85.8 psia @ 70°F 213.4 psia @ 130°F
VAPOR DENSITY (air = 1.0):	3.5
EVAPORATION RATE:	>1 **COMPARED TO:** $CC1_4$ = 1
% VOLATILES:	100
FLASH POINT:	Not applicable

(Flash point method and additional flammability data are found in Section 5.)

10. STABILITY AND REACTIVITY

NORMALLY STABLE? (CONDITIONS TO AVOID):

The product is stable.
Do not mix with oxygen or air above atmospheric pressure. Any source of high temperatures, such as lighted cigarettes, flames, hot spots or welding may yield toxic and/or corrosive decomposition products.

INCOMPATIBILITIES:

(Under specific conditions: e.g. very high temperatures and/or appropriate pressures) – Freshly abraded aluminum surfaces (may cause strong exothermic reaction). Chemically reactive metals: potassium, calcium, powdered aluminum, magnesium, and zinc.

HAZARDOUS DECOMPOSITION PRODUCTS:

Halogens, halogen acids and possibly carbonyl halides.

HAZARDOUS POLYMERIZATION:

Will not occur.

11. TOXICOLOGICAL INFORMATION

IMMEDIATE (ACUTE) EFFECTS:

LC_{50} : 4 hr. (rat) - > 500,000 ppm / Cardiac Sensitization threshold (dog) 80,000 ppm. NOEL – 50,000 ppm

DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS:

Not mutagenic in four tests
Teratogenic NOEL (rat and rabbit) – 40,000 ppm
Subchronic inhalation (rat) NOEL – 50,000 ppm
Chronic NOEL – 10,000 ppm

OTHER DATA:

Metabolism <0.5% as CO_2 in tests at 50,000 ppm, late developing benign tumors were found.

12. ECOLOGICAL INFORMATION

Degradability (BOD): R-134A is a gas at room temperature; therefore, it is unlikely to remain in water.
Octanol Water Partition Coefficient: Log P_{ow} = 1.06

13. DISPOSAL CONSIDERATIONS

RCRA

Is the unused product a RCRA hazardous waste if discarded? Not a hazardous waste
If yes, the RCRA ID number is: Not applicable

OTHER DISPOSAL CONSIDERATIONS:

Disposal must comply with federal, state, and local disposal or discharge laws. R-134A is subject to U.S. Environmental Protection Agency Clean Air Act Regulations Section 608 in 40 CFR Part 82 regarding refrigerant recycling.

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

14. TRANSPORT INFORMATION

US DOT PROPER SHIPPING NAME: 1,1,1,2-Tetrafluoroethane
US DOT HAZARD CLASS: 2.2
US DOT PACKING GROUP: Not applicable
US DOT ID NUMBER: UN3159

For additional information on shipping regulations affecting this material, contact the information number found in Section 1.

15. REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (TSCA)

TSCA INVENTORY STATUS: Listed on the TSCA inventory
OTHER TSCA ISSUES: None

SARA TITLE III / CERCLA

"Reportable Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs) exist for the following ingredients.

INGREDIENT NAME	SARA / CERCLA RQ (lb.)	SARA EHS TPQ (lb.)
No ingredients listed in this section		

Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center [(800) 424-8802] and to your Local Emergency Planning Committee.

SECTION 311 HAZARD CLASS: IMMEDIATE
PRESSURE

SARA 313 TOXIC CHEMICALS:

The following ingredients are SARA 313 "Toxic Chemicals". CAS numbers and weight percents are found in Section 2.

INGREDIENT NAME	COMMENT
No ingredients listed in this section	

STATE RIGHT-TO-KNOW

In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

INGREDIENT NAME	WEIGHT %	COMMENT
No ingredients listed in this section		

ADDITIONAL REGULATORY INFORMATION:

R-134A is subject to U.S. Environmental Protection Agency Clean Air Act Regulations at 40 CFR Part 82.

WARNING: DO NOT vent to the atmosphere. To comply with provisions of the U.S. Clean Air Act, any residual must be recovered. **Contains 1,1,1,2-Tetrafluoroethane (HFC-134a),** a greenhouse gas which may contribute to global warming.

WHMIS CLASSIFICATION (CANADA):

This product has been evaluated in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

FOREIGN INVENTORY STATUS:

Canada – Listed on DSL
EU - EINECS # 223770

16. OTHER INFORMATION

CURRENT ISSUE DATE: March, 2004
PREVIOUS ISSUE DATE: September, 2001

OTHER INFORMATION:

HMIS Classification: Health – 1, Flammability – 1, Reactivity – 0
NFPA Classification: Health – 2, Flammability – 1, Reactivity – 0
ANSI/ASHRAE 34 Safety Group – A1
UL Classified

Regulatory Standards:

1. OSHA regulations for compressed gases: 29 CFR 1910.101
2. DOT classification per 49 CFR 172.101

Toxicity information per PAFT Testing

17. DISCLAIMER

National Refrigerants, Inc. believes that the information and recommendations contained herein (including data and statements are accurate as of the date hereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be valid where such product is used in combination with any other methods of use of the product and of the information referred to herein are beyond the control of National Refrigerants. National Refrigerants expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.

NATIONAL REFRIGERANTS, INC.

R-404A

Safety Data Sheet

R-404A

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: R-404A
OTHER NAME: Pentafluoroethane, 1,1,1-Tetrafluoroethane, 1,1,1,2-Tetrafluoroethane
USE: Refrigerant Gas
DISTRIBUTOR: National Refrigerants, Inc.
661 Kenyon Avenue
Bridgeton, New Jersey 08302

FOR MORE INFORMATION CALL:
(Monday-Friday, 8:00am-5:00pm)
1-800-262-0012

IN CASE OF EMERGENCY CALL:
CHEMTREC: 1-800-424-9300

2. HAZARDS IDENTIFICATION

CLASSIFICATION: **Gases under pressure, Liquefied Gas**
SIGNAL WORD: **WARNING**
HAZARD STATEMENT: **Contains gas under pressure, may explode if heated**
SYMBOL: **Gas Cylinder**
PRECAUTIONARY STATEMENT: **STORAGE: Protect from sunlight, store in a well ventilated place**

EMERGENCY OVERVIEW: Colorless, volatile liquid with ethereal and faint sweetish odor. Non-flammable material. Overexposure may cause dizziness and loss of concentration. At higher levels, CNS depression and cardiac arrhythmia may result from exposure. Vapors displace air and can cause asphyxiation in confined spaces. At higher temperatures, (>250°C), decomposition products may include Hydrofluoric Acid (HF) and carbonyl halides.

POTENTIAL HEALTH HAZARDS

SKIN: Irritation would result from a defatting action on tissue. Liquid contact could cause frostbite.

EYES: Liquid contact can cause severe irritation and frostbite. Mist may irritate.

INHALATION: R-404A is low in acute toxicity in animals. When oxygen levels in air are reduced to 12-14% by displacement, symptoms of asphyxiation, loss of coordination, increased pulse rate and deeper respiration will occur. At high levels, cardiac arrhythmia may occur.

INGESTION: Ingestion is unlikely because of the low boiling point of the material. Should it occur, discomfort in the gastrointestinal tract from rapid evaporation of the material and consequent evolution of gas would result. Some effects of inhalation and skin exposure would be expected.

DELAYED EFFECTS: None known.

3. COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENT NAME	CAS NUMBER	WEIGHT %
Pentafluoroethane (HFC-125)	354-33-6	44
1,1,1-Trifluoroethane (HFC-143a)	420-46-2	52
1,1,1,2-Tetrafluoroethane (HFC-134a)	811-97-2	4

COMMON NAME and SYNONYMS
R-404A; HFC-404A

There are no impurities or stabilizers that contribute to the classification of the material identified in Section 2

4. FIRST AID MEASURES

SKIN: Promptly flush skin with water until all chemical is removed. If there is evidence of frostbite, bathe (do not rub) with lukewarm (not hot) water. If water is not available, cover with a clean, soft cloth or similar covering. Get medical attention if symptoms persist.

EYES: Immediately flush eyes with large amounts of water for at least 15 minutes (in case of frostbite water should be lukewarm, not hot) lifting eyelids occasionally to facilitate irrigation. Get medical attention if symptoms persist.

INHALATION: Immediately remove to fresh air. If breathing has stopped, give artificial respiration. Use oxygen as required, provided a qualified operator is available. Get medical attention. Do not give epinephrine (adrenaline).

INGESTION: Ingestion is unlikely because of the physical properties and is not expected to be hazardous. Do not induce vomiting unless instructed to do so by a physician.

ADVICE TO PHYSICIAN: Because of the possible disturbances of cardiac rhythm, catecholamine drugs, such as epinephrine, should be used with special caution and only in situations of emergency life support. Treatment of overexposure should be directed at the control of symptoms and the clinical conditions.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: Gas, not applicable per DOT regulations
FLASH POINT METHOD: Not applicable
AUTOIGNITION TEMPERATURE: <750°C
UPPER FLAME LIMIT (volume % in air): None*
LOWER FLAME LIMIT (volume % in air): None*
*Based on ASHRAE Standard 34 with match ignition
FLAME PROPAGATION RATE (solids): Not applicable
OSHA FLAMMABILITY CLASS: Not applicable

EXTINGUISHING MEDIA:
Use any standard agent – choose the one most appropriate for type of surrounding fire (material itself is not flammable)

UNUSUAL FIRE AND EXPLOSION HAZARDS:

R-404A is not flammable at ambient temperatures and atmospheric pressure. However, this material will become combustible when mixed with air under pressure and exposed to strong ignition sources.
Contact with certain reactive metals may result in formation of explosive or exothermic reactions under specific conditions (e.g. very high temperatures and/or appropriate pressures).

SPECIAL FIRE FIGHTING PRECAUTIONS/INSTRUCTIONS:

Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool.

6. ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR OTHER RELEASE: (Always wear recommended personal protective equipment.)

Evacuate unprotected personnel. Product dissipates upon release. Protected personnel should remove ignition sources and shut off leak, if without risk, and provide ventilation. Unprotected personnel should not return to the affected area until air has been tested and determined safe, including low-lying areas.

Spills and releases may have to be reported to Federal and/or local authorities. See Section 15 regarding reporting requirements.

7. HANDLING AND STORAGE

NORMAL HANDLING: (Always wear recommended personal protective equipment.)

Avoid breathing vapors and liquid contact with eyes, skin or clothing. Do not puncture or drop cylinders, expose them to open flame or excessive heat. Use authorized cylinders only. Follow standard safety precautions for handling and use of compressed gas cylinders.

R-404A should not be mixed with air above atmospheric pressure for leak testing or any other purpose.

STORAGE RECOMMENDATIONS:

Store in a cool, well-ventilated area of low fire risk and out of direct sunlight. Protect cylinder and its fittings from physical damage. Storage in subsurface locations should be avoided. Close valve tightly after use and when empty.

INCOMPATIBILITIES:

Freshly abraded aluminum surfaces at specific temperatures and pressures may cause a strong exothermic reaction.
Chemically reactive metals: potassium, calcium, powdered aluminum, magnesium, and zinc.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

Provide local ventilation at filling zones and areas where leakage is probable. Mechanical (general) ventilation may be adequate for other operating and storage areas.

PERSONAL PROTECTIVE EQUIPMENT

SKIN PROTECTION:

Skin contact with refrigerant may cause frostbite. General work clothing and gloves (leather) should provide adequate protection. If prolonged contact with the liquid or gas is anticipated, insulated gloves constructed of PVA, neoprene or butyl rubber should be used. Any contaminated clothing should be promptly removed and washed

before reuse.

EYE PROTECTION:

For normal conditions, wear safety glasses. Where there is reasonable probability of liquid contact, wear chemical safety goggles.

RESPIRATORY PROTECTION:

None generally required for adequately ventilated work situations. For accidental release or non-ventilated situations, or release into confined space, where the concentration may be above the PEL of 1,000 ppm, use a self-contained, NIOSH-approved breathing apparatus or supplied air respirator. For escape: use the former or a NIOSH-approved gas mask with organic vapor canister.

ADDITIONAL RECOMMENDATIONS:

Where contact with liquid is likely, such as in a spill or leak, impervious boots and clothing should be worn. High dose-level warning signs are recommended for areas of principle exposure. Provide eyewash stations and quick-drench shower facilities at convenient locations. For tank cleaning operations, see OSHA regulations, 29 CFR 1910.132 and 29 CFR 1910.133.

EXPOSURE GUIDELINES

INGREDIENT NAME	ACGIH TLV	OSHA PEL	OTHER LIMIT
Pentafluoroethane	None	None	*1000 ppm TWA (8hr)
1,1,1-Trifluoroethane	None	None	*1000 ppm TWA (8hr)
1,1,1,2-Tetrafluoroethane	None	None	*1000 ppm TWA (8hr)

* = Workplace Environmental Exposure Level (AIHA)

OTHER EXPOSURE LIMITS FOR POTENTIAL DECOMPOSITION PRODUCTS:

Hydrogen Fluoride: ACGIH TLV: 2 ppm ceiling, 0.5 ppm TLV-TWA

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear, colorless liquid and vapor
PHYSICAL STATE:	Gas at ambient temperatures
MOLECULAR WEIGHT:	120
CHEMICAL FORMULA:	CHF_2CF_3, CH_3CF_3, CH_2FCF_3
ODOR:	Faint ethereal odor
SPECIFIC GRAVITY (water = 1.0):	1.08 @ 21.1°C (70°F)
SOLUBILITY IN WATER (weight %):	Unknown
pH:	Neutral
BOILING POINT:	-47.8°C (-54.0°F)
FREEZING POINT:	Not Determined
VAPOR PRESSURE:	182.9 psia @ 70°F 370.9 psia @ 130°F
VAPOR DENSITY (air = 1.0):	3.43
EVAPORATION RATE:	>1**COMPARED TO:** $CC1_4$ = 1
% VOLATILES:	100
ODOR THRESHHOLD:	Not established
FLAMMABILITY:	Not applicable
LEL/UEL:	None/None
RELATIVE DENSITY:	1.08 g/cm^3 at 21.1 C

PARTITION COEFF (n-octanol/water) Not applicable
AUTO IGNITION TEMP: >750˚C
DECOMPOSITION TEMPERATURE: >250˚ C
VISCOSITY: Not applicable
FLASH POINT: Not applicable
(Flash point method and additional flammability data are found in Section 5.)

10. STABILITY AND REACTIVITY

NORMALLY STABLE: (CONDITIONS TO AVOID):
The product is stable.
Do not mix with oxygen or air above atmospheric pressure. Any source of high temperature, such as lighted cigarettes, flames, hot spots or welding may yield toxic and/or corrosive decomposition products.

INCOMPATIBILITIES:
(Under specific conditions: e.g. very high temperatures and/or appropriate pressures) – Freshly abraded aluminum surfaces (may cause strong exothermic reaction). Chemically active metals: potassium, calcium, powdered aluminum, magnesium and zinc.

HAZARDOUS DECOMPOSITION PRODUCTS:
Halogens, halogen acids and possibly carbonyl halides.

HAZARDOUS POLYMERIZATION:
Will not occur.

11. TOXICOLOGICAL INFORMATION

IMMEDIATE (ACUTE) EFFECTS:

HFC-125:	LC_{50} : Inhalation 4 hr. (rat) - > 800,000 ppm	/ Cardiac Sensitization threshold (dog) 75,000 ppm
HFC-143a:	LC_{50} : Inhalation 4hr. (rat) - > 540,000 ppm	/ Cardiac Sensitization threshold (dog) > 250,000 ppm
HFC-134a:	LC_{50} : Inhalation 4hr. (rat) - > 500,000 ppm	/ Cardiac Sensitization threshold (dog) > 80,000 ppm

DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS:

HFC-125:	Teratogenic NOEL (rat and rabbit) – 50,000 ppm
	Subchronic inhalation (rat) NOEL - ≥ 50,000 ppm / Chronic NOEL – 10,000 ppm
HFC-143a:	Teratogenic NOEL (rat and rabbit) – 50,000 ppm
	Subchronic inhalation (rat) NOEL - ≥ 50,000 ppm
HFC-134a:	Teratogenic NOEL (rat and rabbit) – 40,000 ppm
	Subchronic inhalation (rat) NOEL – 50,000 ppm / Chronic NOEL – 10,000 ppm

OTHER DATA:

HFC-125, HFC-134a:	Not active in four genetic studies
HFC-143a:	Not active in two genetic studies

REPEATED DOSE TOXICITY:
Lifetime inhalation exposure of male rats was associated with a small increase in salivary gland fibrosarcomas.

FURTHER INFORMATION:
Acute effects of rapid evaporation of the liquid may cause frostbite. Vapors are heavier than air and can displace oxygen causing difficulty breathing or suffocation. May cause cariac arrhythmia.

POTENTIAL HEALTH HAZARDS

SKIN: Irritation would result from a defatting action on tissue. Liquid contact could cause frostbite.
EYES: Liquid contact can cause severe irritation and frostbite. Mist may irritate.

INHALATION: R-404A is low in acute toxicity in animals. When oxygen levels in air are reduced to 12-14% by displacement, symptoms of asphyxiation, loss of coordination, increased pulse rate and deeper respiration will occur. At high levels, cardiac arrhythmia may occur.

INGESTION: Ingestion is unlikely because of the low boiling point of the material. Should it occur, discomfort in the gastrointestinal tract from rapid evaporation of the material and consequent evolution of gas would result. Some effects of inhalation and skin exposure would be expected.

DELAYED EFFECTS: None known.

Ingredients found on one of the OSHA designated carcinogen lists are listed belOW

INGREDIENT NAME	NTP STATUS	IARC STATUS	OSHA LIST
No ingredients listed in this section			

FURTHER INFORMATION:
Acute effects of rapid evaporation of the liquid may cause frostbite. Vapors are heavier than air and can displace oxygen causing difficulty breathing or suffocation. May cause cardiac arrhythmia.

12. ECOLOGICAL INFORMATION

Degradability (BOD): R-404A is a gas at room temperature; therefore, it is unlikely to remain in water.
Octanol Water Partition Coefficient: See section 9

13. DISPOSAL CONSIDERATIONS

RCRA

Is the unused product a RCRA hazardous waste if discarded? Not a hazardous waste.
If yes, the RCRA ID number is: Not applicable.

OTHER DISPOSAL CONSIDERATIONS:
Disposal must comply with federal, state, and local disposal or discharge laws. R-404A is subject to U.S. Environmental Protection Agency Clean Air Act Regulations Section 608 in 40 CFR Part 82 regarding refrigerant recycling.

The information offered here is for the product as shipped. Use and/or alterations to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.

14. TRANSPORT INFORMATION

US DOT ID NUMBER: UN3337
US DOT PROPER SHIPPING NAME: Refrigerant gas R 404A
US DOT HAZARD CLASS: 2.2
US DOT PACKING GROUP: Not applicable

For additional information on shipping regulations affecting this material, contact the information number found in Section 1.

15. REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (TSCA)

TSCA INVENTORY STATUS: Components listed on the TSCA inventory
OTHER TSCA ISSUES: Subject to Section 12 (b) export notification. May contain 0-10ppm Ethane, 2-chloro-1,1,1-trifluoro CAS # 75-88-7

SARA TITLE III / CERCLA

"Reportable Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs) exist for the following ingredients.

INGREDIENT NAME	SARA / CERCLA RQ (lb.)	SARA EHS TPQ (lb.)
No ingredients listed in this section		

Spills or releases resulting in the loss of any ingredient at or above its RQ requires immediate notification to the National Response Center [(800) 424-8802] and to your Local Emergency Planning Committee.

SECTION 311 HAZARD CLASS: IMMEDIATE PRESSURE

SARA 313 TOXIC CHEMICALS:
The following ingredients are SARA 313 "Toxic Chemicals". CAS numbers and weight percents are found in Section 2.

INGREDIENT NAME	COMMENT
No ingredients listed in this section	

STATE RIGHT-TO-KNOW

In addition to the ingredients found in Section 2, the following are listed for state right-to-know purposes.

INGREDIENT NAME	WEIGHT %	COMMENT
No ingredients listed in this section		

ADDITIONAL REGULATORY INFORMATION:

R-404A is subject to U.S. Environmental Protection Agency Clean Air Act Regulations at 40 CFR Part 82.
WARNING: Contains Pentafluoroethane (HFC-125), 1,1,1-trifluoroethane, tetrafluoroethane, greenhouse gases which may contribute to global warming. **Do not vent** to the atmosphere. To comply with provisions of the U.S. Clean Air Act, any residual must be recovered.

WHMIS CLASSIFICATION (CANADA):

This product has been evaluated in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

FOREIGN INVENTORY STATUS:

EU – EINECS # 2065578 – HFC-125
2069965 – HFC-143a
223770 – HFC-134a

16. OTHER INFORMATION

CURRENT ISSUE DATE: April, 2015
PREVIOUS ISSUE DATE: November, 2012

OTHER INFORMATION: HMIS Classification: Health – 1, Flammability – 1, Reactivity – 0
NFPA Classification: Health – 2, Flammability – 1, Reactivity – 0
ANSI / ASHRAE 34 Safety Group – A1

Regulatory Standards:

1. OSHA regulations for compressed gases: 29 CFR 1910.101
2. DOT classification per 49 CFR 172.101

Toxicity information per PAFT Testing

DISCLAIMER:

National Refrigerants, Inc. believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be valid where such product is used in combination with any other methods or use of the product and of the information referred to herein are beyond the control of National Refrigerants. National Refrigerants expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.

MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 3 Flammability = 0 Reactivity = 0
HMIS RATING: Health = 3 Flammability = 0 Reactivity = 0

SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (0442C)

Manufacturer's Name: HILLYARD INDUSTRIES
Address: 302 North Fourth Street
St. Joseph, MO 64501

Product Name: **RE-JUV-NAL 165**
Date Prepared: May 13, 1994
Prepared by: Regulatory Affairs Department

Emergency Telephone No.: (800)-424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)

Other information calls: (816) 233-1321 (Ext. 2303)
www.hillyard.com

SECTION II -- INGREDIENTS/IDENTITY INFORMATION

Components (Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Octyl Decyl Dimethyl Ammonium Chloride Dioctyl Dimethyl Ammonium Chloride Didecyl Dimethyl Ammonium Chloride **OR** Di-N-Alkyl (C_8/C_{10}-50%; C_{10}/C_{10}-30%; C_8/C_8-20%) dimethyl ammonium chloride	68424-95-3	not established	not established	N/A	1.08
Alkyl (C_{14}, 50%; C_{12}, 40%; C_{16}, 10%) Dimethyl Benzyl Ammonium Chloride	68424-85-1	not established	not established	N/A	0.72
Ethanol	64-17-5	1000 ppm	1000ppm	N/A	less than 2%
Sodium metasilicate	6434-92-0	not established	not established	2 mg/m^3	0.2 - 0.7
Water	7732-18-5	none	none	N/A	---
Tetrasodium ethylene diamine tetraacetate	64-02-8	not established	not established	N/A	---
Nonylphenol Ethoxylate	9016-45-9	not established	not established	N/A	---

SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 738 mm 202ºF **Specific Gravity (H_20 = 1):** 25ºC = 1.01 & 39ºC = 1.01
Vapor Pressure (mm Hg.): 17.6 **Percent Volatile by Volume (%):** 92.6
Vapor Density (AIR = 1): less than 1 **Evaporation Rate (ethyl ether = 1):** slower than 1
Solubility in Water: appreciable **Appearance and Odor:** red liquid; floral odor
pH of concentrate: 12.4 -13.4

SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flash point: None to boiling (T.C.C.) **Flammable Limits:** LEL = N/A UEL = N/A
Extinguishing Media: Water, dry chemical, carbon dioxide, foam
Special Fire Fighting Procedures: Wear MSHA/NIOSH approved self-contained breathing apparatus. Cool fire-exposed containers with water spray.
Unusual Fire and Explosion Hazards: Products of combustion are toxic.

SECTION V -- PHYSICAL HAZARDS

Stability: Stable **Conditions to Avoid:** Do not mix with anionic cleaners.
Incompatibility (Materials to Avoid): Oxidizing materials
Hazardous Decomposition Products or Byproducts: Carbon dioxide, carbon monoxide, ammonia, nitrous oxides, hydrogen chloride
Hazardous Polymerization: Will not occur **Conditions to Avoid:** none known

SECTION VI -- HEALTH HAZARD DATA

Routes of entry: Inhalation? yes Skin? yes Ingestion? yes

HEALTH HAZARDS (1. Acute and 2. Chronic)

1. Concentrate is corrosive to all body tissue with which it comes in contact.
2. Prolonged and repeated exposure to the skin may produce dermatitis. Fine fog mist application is not recommended.

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No **I.A.R.C. Monographs =** No **OSHA =** No

SECTION VI -- HEALTH HAZARD DATA cont.

Signs and Symptoms of Exposure: Direct eye contact can cause severe damage; repeated skin contact can cause severe irritation; concentrate is corrosive to eyes and skin. Ingestion of concentrate: immediate burning pain in mouth, throat, abdomen and severe swelling of larynx, skeletal muscle paralysis and affecting the ability to breathe.
Medical Conditions Generally Aggravated by Exposure: Skin problems such as industrial dermatitis.
Emergency and First Aid Procedures: In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes call a physician. Remove and wash contaminated clothing before reuse. If swallowed, drink promptly a large quantity of egg whites, gelatin solution or if these are not available, drink large quantities of water. Avoid alcohol. Call a physician immediately. Note to physician: Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled: Dike and contain spill with inert material (sand, earth, etc.) and transfer liquid and solid separately to containers for recovery or disposal. Small spills: Flush with water and pick up with wet vac or mop when on inside flooring. The pH of the concentrate is 12.4-13.4, thus concentrate is defined as corrosive per EPA Hazardous Waste Classification; when diluted with normal tap water for use to pH below 12.5 is not corrosive per EPA definition but still a pesticide waste.
Waste Disposal Method: Pesticide wastes are acutely hazardous. Do not contaminate water, food or feed by storage or disposal. If these wastes cannot be disposed of by use according to label instructions contact you state pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Office for guidance.
Precautions To Be Taken In Handling And Storing: Do not store on side. Avoid creasing or impacting of side walls of package.
Other Precautions: Container disposal: Triple rinse (or equivalent). Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities by burning. If burned stay out of smoke. This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning and Community Right to Know Act of 1986 and 40 CFR Part 372.

SECTION VIII -- CONTROL MEASURES

Respiratory Protection (Specify Type): None normally required. If exposed to fine mist droplets of less than 15 microns, a NIOSH/MSHA approved respirator should be worn.
Ventilation: 10 air changes per hour recommended
Local Exhaust = N/A **Mechanical (General) =** recommended **Special =** N/A **Other =** N/A
Protective Gloves: rubber or neoprene with concentrate **Eye Protection:** chemical goggles or face shield with concentrate
Other Protective Clothing or Equipment: None
Work / Hygienic Practices: Wash thoroughly after handling.

SECTION IX - TRANSPORTATION INFORMATION

Applicable regulations: 49 CFR = no; **IMCO =** no; **IATA =** no.

Proper shipping name: Cleaning Compound
UN No.: not applicable **Limited Qty.:** not applicable **Hazard Class:** not applicable
Labels required: not required **DOT Exception:** not applicable
EPA Hazardous waste number/code: not listed
Hazardous waste characteristics:
Ignitability = not applicable; **Corrosivity** = yes; **Reactivity** = not applicable.

DISCLAIMER OF WARRANTIES

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.
The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate.
THE BUYER OR USER ASSUMES ALL RISKS ASSOCIATED WITH THE USE, MISUSE OR DISPOSAL OF THIS PRODUCT. THE BUYER OR USER IS RESPONSIBLE TO COMPLY WITH ALL FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING THE USE, MISUSE OR DISPOSAL OF THESE PRODUCTS.

Maintenance Solutions

Renew

Lemon Oil Furniture Polish

For Use On:

Furniture	Tables	Metal Furniture
Vinyl	Paneling	Painted Surfaces
Plastics	Leather	Bathroom Fixtures
Appliances	Rubber	Filing Cabinets
Ceramic Tile	Enamel	Countertops
Stainless Steel		

DESCRIPTION

A highly refined blend of solvents, lemon oil, and cleaning agents for a quick cleanup of furniture and equipment. Waxes and protects nearly all surfaces. Wipes to a tough, dry shine. Just apply to surface and wipe clean. Resists smears and fingerprints.

DIRECTIONS

1. Apply a light amount of product onto surface that is to be polished.
2. Wipe immediately with a soft, clean cloth until the surface is shiny.
3. For vertical surfaces, or if sprayed next to upholstery, apply directly onto cloth, then polish.

PRODUCT SPECIFICATIONS

Color:	Clear	**Abrasives:**	None
Odor:	Lemon	**Flash Point:**	103°F (TCC)
Base:	Paraffin & lemon oils	**Storage/Stability:**	2 years
pH:	N/A	**Weight per Gallon:**	6.93 lbs./gal.
Viscosity:	Slightly viscous	**Freeze / Thaw Stability:**	Keep from freezing
Foam:	None		

Multi-Surface Polishes

Misco Products Corporation • Reading, PA • (800) 548-4568 FAX (610) 926-1194
www.miscoprod.com

REN
Prepared by: Regulatory Affairs Dept.

MATERIAL SAFETY DATA SHEET

(Prepared According to 29 CFR 1910.1200)

N/A=Not Applicable
Effective Date: 5/99 Revision: n/a

SECTION 1-PRODUCT IDENTIFICATION AND SUPPLIER INFORMATION

Manufacturer's Name:
Misco Products Corporation
Manufacturer's Address:
1048 Stinson Drive Reading, PA 19605
Manufacturer's Phone #: (610) 926-4106

Product Name: Renew
Generic Name: Lemon Oil Furniture Polish
Chemical Family: Paraffinic Oil/Lemon Oil Blend
Formula: Proprietary

SECTION 2-INGREDIENT INFORMATION

CHEMICAL NAME	CAS NO.	WT. %	PEL	TWA-TLV	STEL-TLV
Paraffinic Oils	64742-30-9	95 to 98			
Lemon Oil	N/A	0 to 5	100 ppm	100 ppm	N/A

SECTION 3-PHYSICAL DATA

Boiling Point (ºF): 316 F. Initial
Specific Gravity: .83
Vapor Pressure: <10mm Hg @ 68 F.
Vapor Density (Air=1): >1
% Volatile: 100
pH: N/A
Solubility in Water: Nil
Evaporation Rate (Water=1): <1
Physical Description: Slightly viscous clear liquid with pleasant odor.

SECTION 4-FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): 106 F. (TCC)
Upper Explosion Limit: 6.0
Lower Explosion Limit: 1.0
Extinguishing Media: Foam, CO_2, Dry Chemical
Special Firefighting Procedures: Do Not Use Water.
Unusual Fire and Explosion Hazards: Drums heated by fire can explode.

SECTION 5-REACTIVITY DATA

Stability: Stable
Hazardous Polymerization: None
Hazards Decomposition Products: Carbon monoxide possible if burned.
Incompatibility (Materials to Avoid): Strong oxidizers.

SECTION 6-STORAGE AND HANDLING INFORMATION

Combustible liquid ñ Avoid contact with heat, spark or open flame. Keep out of reach of children. For use by trained personnel only. Keep container closed during storage. For institutional and industrial use only. Avoid contact with eyes, skin and clothing. Avoid breathing of vapors or mists. Use in well-ventilated area.

SECTION 7-HEALTH HAZARDS AND FIRST AID

Effects of Overexposure:
Skin: Prolonged or repeated contact may cause irritation or dermatitis.
Eyes: Eye irritant. May cause redness, swelling, or blurred vision.
Inhalation: May cause dizziness or drowsiness.
Ingestion: May cause dizziness, drowsiness or narcosis. Aspiration of material into the lungs can cause pneumonitis.

First Aid Procedures:
Skin: Remove contaminated clothing. Wash with soap and water. Seek medical attention if irritation persists.
Eyes: Flush with large quantities of water, holding eyelids open. Seek medical attention.
Inhalation: Get to fresh air. If breathing is difficult, give oxygen. Seek medical attention if symptoms persist.
Ingestion: Do not induce vomiting. Seek medical attention immediately.

SECTION 8-SPECIAL PROTECTION INFORMATION

Respiratory Protection: Use with adequate ventilation. Use hydrocarbon canister or respirator when using in confined areas.
Ventilation Requirements: Provide mechanical exhaust to keep TLV of Section 2 ingredients below acceptable limit.
Protective Gloves: Solvent proof rubber or viton.
Eye Protection: Safety glasses recommended.
Other Protective Equipment: Eyewash should be provided nearby.

SECTION 9-SPILL OR LEAK PROCEDURES

Steps to be taken in Case Material is Released or Spilled: Floors will become slippery. Avoid walking in product. Keep unessential personnel away. Mop up or otherwise absorb and hold disposal. Avoid discharge to sewer or open waterways.
Waste Disposal Method: Any method in accordance with local, state and federal laws. Best method is to recycle or reuse for intended purpose. Consult local authorities for disposal in public sewer. Do not dispose of into storm drain, stream, river or to ground. Rinse container thoroughly before discarding in trash.

SECTION 10-REGULATORY INFORMATION

SARA Title III - Section 311/312 -Hazard Categories:
Yes - Fire Hazard
No - Sudden Release of Pressure Hazard
No - Reactivity Hazard
Yes - Immediate (acute) Health Hazard
No - Delayed (chronic) Health Hazard

Shipping Information:
FOR CONTAINERS > 1 Gallon : Cleaning Compound
FOR 1 GALLON CONTAINERS : Cleaning Compound
FOR CONTAINERS < 1 GALLON : Cleaning Compound

HMIS Hazardous Materials Identification System

Health	**2**
Flammability	**2**
Reactivity	**0**
Personal Protection	**B**

FOR EMERGENCY MEDICAL OR TRANSPORT INFORMATION: CHEM-TEL, Inc. @ 800-255-3924 **(24 hours, 7 days per week)**

This product contains the following toxic chemical(s) subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.

CAS#	Chemical Name	Percent by Weight
	None	

This product contains the following chemical(s) which have been established to be either a carcinogen or suspected carcinogen.

CAS#	Chemical Name	Percent by Weight
	None	

SECTION 11-OTHER INFORMATION

This company cannot anticipate all conditions of handling and use of this product. Therefore, this company accepts no responsibility for results obtained by the application of this information, or the safety and suitability of our products either alone or in combination with other products. It is the responsibility of the user to provide a safe workplace, using the health and safety information contained herein as a guide. This company will accept no liability for damages or loss incurred from the improper handling and use of this product

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

HMIS®			
HEALTH	3	REACTIVITY	0
FLAMMABILITY	1	PERSONAL PROTECTION	B

Identity (As Used on Label and List)
REN05022 **Baseboard Stripper / Cleaner**

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

SECTION I

Distributed Exclusively By AMSAN LLC	**Emergency Telephone Number** 1-800-535-5053
Address (Number, Street, City, State, and ZIP Code) Three Parkway North Suite 120 N	**Telephone Number for Information** 847-607-2300
Deerfield, IL 60015	**Date Prepared** April 19 2004

SECTION II - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	CAS No.	OSHA PEL	ACGIH-TLV	Other Limits Recommended	% (Opt.)
Isobutane	75-28-5	800 ppm	800 ppm		7 - 13 %
Ethanolamine	141-43-5	3 ppm	3 ppm	STEL - 6 ppm	1 - 5 %
*2-Butoxyethanol	111-76-2	50 ppm**	25 ppm**		1 - 5 %
Propane	74-98-6	1000 ppm	Asphyxiant		1 - 5 %

*2-Butoxyethanol (a glycol ether compound) may require reporting under SARA Title III Sec. 313 if used over the threshold reporting quantity. Refer to 40 CFR 372. This information must be included in all MSDSs that are copied for this material.

** - Skin designation

TSCA: All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

Any substance listed as hazardous by the States of California, Florida, Illinois, Michigan, New Jersey, Ohio, Pennsylvania or Texas is described above if known present in regulated concentrations.

SECTION III Physical/Chemical Characteristics

Boiling Point Concentrate	212° F	**Specific Gravity (H_2O = 1)** Concentrate	1.04
Pressure (psig. @ 70° F)	60 ± 5	**Melting Point**	No Data
Vapor Density (AIR = 1)	Greater than one (1)	**Evaporation Rate (Butyl Acetate = 1)**	No Data
Solubility in Water Complete		**pH**	12.2 ± 0.5
Appearance and Odor -- Opaque tan liquid with an ethereal scent in an aerosol can.		**VOC's**--This product contains 169 grams per liter or 22% by weight VOC's.	

SECTION IV - Fire and Explosion Hazard Data

USA Flame Projection Test 3" - No Flashback - Nonflammable	**Flammable Limits** No Data	**LEL** No Data	**UEL** No Data

Extinguishing Media -
Not usually necessary as this product does not readily support combustion. Use extinguishing agent suitable to fuel source.

Special Fire Fighting Procedures - Use water spray to keep containers cool and vapors down. Do not allow runoff to enter sewers or public watercourses. Wear self-contained breathing apparatus in chemical fires.

Unusual Fire and Explosion Hazards -
Aerosol container (pressurized) may burst if heated over 120° F.

SECTION V - Reactivity Data

Stability	Unstable		Conditions to Avoid - Extreme heat, direct sunlight
	Stable	X	

Incompatibility (Materials to Avoid)
Strong oxidizers, acids, aluminum, tin, lead, zinc.

Hazardous Decomposition or Byproducts
Carbon dioxide, carbon monoxide, oxides of nitrogen.

Hazardous Polymerization	May Occur		Conditions to Avoid - None known
	Will Not Occur	X	

SECTION VI - Health Hazard Data

Route(s) of Entry	Eyes?	Inhalation?	Skin?	Ingestion?
	Yes	Yes	Yes	Yes

Health Hazards (Acute and Chronic) -
Danger: Corrosive. May be harmful or fatal if swallowed. Causes burns to eyes and skin with direct contact. May cause respiratory tract irritation. May be absorbed through intact skin. Central nervous system effects may be induced if used with improper ventilation. Use proper chemical hygiene to avoid these hazards.

Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
None known.	No	No	No

Signs and Symptoms of Exposure -
Burning or tearing in eyes. Irritation of nose and throat. Redness, irritation or slick feeling on skin. Nausea, loss of coordination, fatigue.

Medical Conditions Generally Aggravated by Exposure -
Pre-existing skin and lung disorders (i.e. - asthma) can be effected by prolonged or repeated occupational overexposure.

Emergency and First Aid Procedures: -
Eyes - Flush with plenty of water for at least 15 minutes lifting eyelids to insure complete removal. Get immediate medical attention. **Ingestion -** DO NOT induce vomiting unless directed by a physician. If conscious, rinse out mouth with water, then give large quantities of water and seek immediate medical attention. Never give anything by mouth to an unconscious person. **Inhalation -** Get to fresh air. If breathing has stopped, qualified personnel should administer artificial respiration. **Skin -** Flush with plenty of water for at least 15 minutes. If irritation arises and persists, seek medical attention.

SECTION VII - Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled -
Isolate traffic and ventilate area. Eliminate all ignition sources. Wear protective gear as necessary. Dike to prevent spread. Do not allow material to enter sewers or drains. Pick up on absorbent or use vacuum. Put in suitable container. Dispose of properly.

Waste Disposal Method -
Consult local, state and federal regulations. Do not puncture or incinerate container. Replace cap on empty can, wrap, then discard container if allowed by applicable statutes.

Precautions to be Taken in Handling and Storing - Do not get in eyes, on skin or clothing. Wash thoroughly after handling. Launder contaminated clothing before reuse. Store in a cool (under 120° F) dry location away from heat, sparks, open flame, and direct sunlight. Direct spray away from face. Replace cap when not in use. Avoid inhaling mist or vapors.

Other Precautions - Follow label directions carefully. Keep out of reach of children. Do not deliberately concentrate and inhale vapors. Do not inhale mist or vapors. Do not swallow. Use with adequate ventilation.

SECTION VIII - Control Measures

Respiratory Protection (Specify Type) - Not usually necessary. Use with adequate ventilation. If PELs or TLVs are exceeded (see Section II), use an approved NIOSH\MSHA respirator.

Ventilation	Local Exhaust	Satisfactory	Special	None
	Mechanical (General)	Yes	Other	None

Protective Gloves	Eye Protection
Impervious	Safety glasses or goggles (ANSI Z87)

Other Protective Clothing or Equipment - As needed to protect against all skin contact. (i.e. - apron, boots, etc.)

Work/Hygienic Practices - Normal. Wash thoroughly before eating, drinking, smoking, using restrooms, etc.

WARNING! The use of this product is beyond the control of the distributor; therefore, no guarantee, expressed or implied, is made as to the effects of such or the results to be obtained if not used in accordance with directions or established safe practice. The user must assume all responsibility, including injury or damage, resulting from its misuse as such, or in combination with other materials. The distributor warrants only that this product meets the distributor's specifications for such product. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AS TO DESCRIPTION, QUALITY, MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, PRODUCTIVENESS, OR ANY OTHER MATTER, OF THIS PRODUCT. THE DISTRIBUTER SHALL BE IN NO WAY RESPONSIBLE FOR THE IMPROPER USE OF THIS PRODUCT. The sole and exclusive remedy against the distributor for breach of warranty shall be reimbursement of the purchase price of the product in the event that a defective condition of the product shall be found to exist. NO OTHER REMEDY (INCLUDING BUT NOT LIMITED TO INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR INJURY TO PERSON OR PROPERTY OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE.

MATERIAL SAFETY DATA SHEET

05003

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND DISTRIBUTOR'S INFORMATION

NFPA Rating: Health-2; Flammability-1; Reactivity-0; Special- -

HMIS Rating: Health-2; Flammability-1; Reactivity-0; Personal Protection-B

Manufactured For: AmSan
Address: Three Parkway North, Suite 120N
Deerfield, IL 60015

DOT Hazard Classification: ORM-D
Identity (trade name as used on label):
RENOWN CREAMY LEMON FURNITURE POLISH

Phone: 1-847-607-2300

MSDS Number: A00134 Revision- 11

EMERGENCY RESPONSE NUMBER: 1(800)255-3924
NOTICE: JUDGMENT BASED ON INDIRECT TEST DATA

Date Prepared: 09/10/01 Prepared By: AH/IB
Information Calls: (770)422-2071

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
PETROLEUM DISTILLATES	68551-19-9	No	NE	NE	d
ISOBUTANE / PROPANE BLEND	75-28-5	No	800	800	d
	74-98-6	No	1000	1000	d

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/A

Specific Gravity (H2O=1): Concentrate Only = 0.954

Vapor Pressure: PSIG @ 70°F (Aerosols): Max.55

Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A

Vapor Density (Air = 1): N/E

Evaporation Rate (BuAc = 1): Slower

Solubility in Water: Slight

Water Reactive: No

Appearance and Odor: Creamy white spray with lemon fragrance.

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) **NON-FLAMMABLE**

Auto Ignition Temperature N/E

Flammability Limits in Air by % in Volume: % LEL: N/E % UEL: N/E

FLASH POINT AND METHOD USED (non-aerosols): N/A
SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus.

EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide.

Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture.

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY [X] STABLE [ ] UNSTABLE

HAZARDOUS POLYMERIZATION [ ] WILL [X] WILL NOT OCCUR

Incompatibility (Mat. to avoid): Strong oxidizers and alkalies.

Conditions to Avoid: Open flame, welding arcs, heat, sparks.

Hazardous Decomposition Products: CO2, CO, hydrogen chloride.

SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: [X] INHALATION [ ] INGESTION [X] SKIN ABSORPTION [ ] EYE [ ] NOT HAZARDOUS

ACUTE EFFECTS:

Inhalation: Excessive inhalation of vapors can be harmful and may cause headaches, dizziness, asphyxia, anesthetic effects and possible unconsciousness.

Eye Contact: Mild irritant.

Skin Contact: Mild irritant.

Ingestion: Possible chemical pneumonitis if aspirated into lungs. Nausea.

CHRONIC EFFECTS: (Effects due to excessive exposure to the raw materials of this mixture) May cause cardiac abnormality, liver abnormalities, kidney and/or lung damage.

Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, upper respiratory conditions, liver disease & heart irregularities.

EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush with water for at least 15 minutes. If irritated, seek medical attention.

Skin Contact: Wash with soap and water. Remove contaminated clothing & launder before re-wearing. If irritated, seek medical attention.

Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.

Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by U.S. Bureau of Mines for organic vapor.

Protective Gloves: Latex if skin is easily irritated.

Eye Protection: Safety glasses recommended.

Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.

Other Protective Clothing & Equipment: None

Hygienic Work Practices: Wash with soap and water before handling food. Remove contaminated clothing.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Absorb spilled liquid with suitable medium. Incinerate or landfill according to local, state or Federal regulations. DO NOT FLUSH TO SEWER.

Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.

Precautions To Be Taken In Handling & Storage: Do not puncture or incinerate containers. Do not store at temperatures above 130°F.

Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN. Avoid food contamination. Avoid breathing vapors.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

** Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only

Material Safety Data Sheet

HMIS®			
HEALTH	2	REACTIVITY	0
FLAMMABILITY	3	PERSONAL PROTECTION	B

Identity: RENOWN Gel Vandal Mark Remover **REN05011-IT**	*Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.*

SECTION 1: Company Identification

Manufacturer's Name AmSan LLC	**Emergency Telephone Number** 888-255-3924
Address (Number, Street, City, State, and ZIP Code) 5727 South Lewis Avenue	**International Emergency Telephone Number** 888-255-3924
Tulsa, OK 74105	**Telephone Number for Information** 918-743-6030
	Signature of Preparer (Optional) Regulatory Dept.

SECTION 2: Ingredients/Identity Information

Components (Chemical Identity, Common Name(s))	CAS No.	OSHA PEL	ACGIH-TLV	Other Limits Recommended	% (Opt.)
Toluene	108-88-3	200 ppm	50 ppm	STEL 150 ppm	15 – 40%
Isobutane	75-28-5	800 ppm	800 ppm		10 – 30%
Tertiary Butyl Acetate	540-88-5	200 ppm	200 ppm		3 – 7%
Acetone	67-64-1	1000 ppm	500 ppm	STEL 750 ppm	3 – 7%
Propane	74-98-6	1000 ppm	Asphyxiant		3 – 7%
2-Butoxyethanol (skin designation)	111-76-2	50 ppm	20 ppm		1 – 5%
Dimethyl Glutarate	1119-40-0	None	None		1 – 5%
Dimethyl Adipate	627-93-0	None	None		1 – 5%

Any substance listed as hazardous by the States of California, Florida, Illinois, Michigan, New Jersey, Ohio, Pennsylvania or Texas is described above if known present in regulated concentrations.

SECTION 3: Hazards Identification

Route(s) of Entry	Eyes?	Inhalation?	Skin?	Ingestion?
	Yes	Yes	Yes	Yes

Acute Health Hazards - Warning. Flammable liquid and vapor. Causes eye and skin irritation. May be harmful or fatal if swallowed. Aspiration hazard. May cause respiratory tract irritation. May be absorbed through intact skin.

Chronic Health Hazards - Repeated or prolonged occupational overexposure can cause dermatitis and Painter's syndrome.

Carcinogenicity:

Chemical:	OSHA:	NTP:	IARC:
None	No	No	No

Signs and Symptoms of Exposure - Redness, burning and tearing in eyes. Redness, burning, drying of skin. Drowsiness, dizziness, loss of coordination, fatigue.

Medical Conditions Generally Aggravated by Exposure - Pre-existing skin and lung disorders. Overexposure may also aggravate pre-existing blood, liver and kidney disorders.

SECTION 4: Emergency and First Aid Procedures:

Eyes - Flush with plenty of water for at least 15 minutes. Get medical attention immediately.

Ingestion - Call a physician immediately. Do NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person.

Inhalation - Get to fresh air. If breathing has stopped, qualified personnel should administer artificial respiration. If breathing is difficult give oxygen.

Skin - Flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if irritation arises or persists. Launder contaminated clothing and shoes before reuse.

SECTION 5: Fire Fighting Measures

USA Flame Projection Test	Flammable Limits	LEL	UEL
Greater than 18", no flashback, Flammable	No Data	No Data	No Data

Extinguishing Media - Carbon dioxide, dry chemical, foam.

Special Fire Fighting Procedures - Keep containers cool and vapors down with water spray. Prevent runoff from entering sewers and public waterways. Wear self-contained breathing apparatus (SCBA) in chemical fires.

Hazardous Products of Combustion- Oxides of carbon, smoke, soot.

Unusual Fire and Explosion Hazards - Aerosol container (pressurized) may burst if heated over 120° F. Flammable contents.

SECTION 6: Accidental Release Measures

Small Spill - Wipe up small releases with a dry absorbent cloth or other absorbent material.

Large Spill – Absorb liquid with vermiculite, absorbent cloth, or other absorbent material. Prevent material from entering sewers or drains. Ventilate area and block traffic. Transfer contaminated material into suitable container for proper disposal.

SECTION 7: Handling and Storage

Handling - Do not get in eyes, on skin or clothing. Do not use around ignition sources such as heat, sparks, open flame, etc. Do not swallow. Do not inhale mist or vapors. Do not deliberately concentrate and inhale vapors. Do not smoke while using. Direct spray away from face. Use with adequate ventilation.

Storage – Follow label instructions carefully. Keep out of reach of children. Store in a cool (under 120° F) dry location away from heat, sparks, open flame or direct sunlight. Do not puncture or incinerate container. Replace cap when not in use. Contents under pressure.

SECTION 8: Exposure Controls / Personal Protection

Eye Protection – Yes, safety glasses or goggles (ANSI Z87)

Skin Protection – Yes, impervious.

Respiratory Protections – Not usually necessary. Use with adequate ventilation. Use NIOSH/MSHA approved respirator if PELs or TLVs are exceeded.

Engineering Controls – Ventilation not usually necessary but should be provided in the event of overexposure.

SECTION 9: Physical and Chemical Properties

Appearance and Odor:	Opaque white to light tan liquid emulsion with an aromatic odor in an aerosol can.
PH	9.7 ± 1.0
Specific Gravity (70°F)	0.935
Boiling Point:	212° F
Melting Point:	No Data
Evaporation Rate (Butyl Acetate = 1)	No Data
Pressure (psig. @ 70°F)	65 ± 10
Vapor Density (AIR = 1)	>1
Solubility in Water	Complete
Volatile Organic Compounds (VOCs)	409.75 grams per liter or 49.9% by weight VOC's

SECTION 10: Stability and Reactivity

Hazardous Polymerization – This product will not undergo hazardous polymerization.

Hazardous Decomposition or Byproducts – Oxides of carbon, smoke, soot.

Chemical Stability - Stable

Incompatibility (Materials to Avoid) - Strong acids and oxidizers, chlorinated compounds, nitrates and select amines.

SECTION 11: Toxicological Information

No Data

SECTION 12: Ecological Information

No Data

SECTION 13: Disposal Consideration

Disposal Method - Dispose of in accordance with all applicable local, state, and federal regulations.

RCRA Waste Information – If this product becomes a waste, it would be a hazardous waste (D001) as defined by RCRA (40 CFR 261). However the waste should be properly characterized to evaluate whether its composition has been modified prior to disposal.

SECTION 14: Transport Information

DOT Information – 49 CFR 172.101

Proper Shipping Description: Consumer Commodity
Hazard Class: ORM-D
Identification Number: None
Packing Group: None

Water Transportation:

Proper Shipping Description: Aerosols
Hazard Class: 2
Identification Number: UN 1950
Packing Group: None

Air Transportation:

Proper Shipping Description: Aerosols, flammable
Hazard Class: 2.1
Identification Number: UN 1950
Packing Group: None

Marine Pollutants: None

SECTION 15: Regulatory Information

US Federal Regulations:

TSCA (Toxic Substances Control Act) Status

All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

CERCLA RQ – 40 CFR 302.4 (a)

Toluene – 1000 lbs
Acetone – 5000 lbs
Tertiary Butyl Acetate – 5000 lbs

SARA 313 Components – 40 CFR 372.65

Toluene (CAS: 108-88-3) – 28.3%
2-Butoxyethanol (CAS: 111-76-2) – 2.4%

State and Local Regulations:

California Proposition 65

Warning: This product contains a chemical (Toluene) known to the State of California to cause birth defects or other reproductive harm.

Section 16: Additional Information

Date Prepared:
Rev. 3 – 01/26/07 – Reformulation.
Rev. 2 – 08/25/06 – VOC Reformulation.
Rev. 1 - 04/03/06

WARNING! The use of this product is beyond the control of the manufacturer; therefore, no guarantee, expressed or implied, is made as to the effects of such or the results to be obtained if not used in accordance with directions or established safe practice. The user must assume all responsibility, including injury or damage, resulting from its misuse as such, or in combination with other materials. The manufacturer warrants only that this product meets the manufacturer's specifications for such product. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AS TO DESCRIPTION , QUALITY, MERCHANTABILITY. FITNESS FOR ANY PARTICULAR PURPOSE, PRODUCTIVENESS, OR ANY OTHER MATTER, OF THIS PRODUCT. THE MANUFACTURER SHALL BE IN NO WAY RESPONSIBLE FOR THE IMPROPER USE OF THIS PRODUCT. The sole and exclusive remedy against the manufacturer for breach of warranty shall be reimbursement of the purchase price of the product in the event that a defective condition of the product shall be found to exist. NO OTHER REMEDY (INCLUDING BUT NOT LIMITED TO INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR INJURY TO PERSON OR PROPERTY OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSS) SHALL BE AVAILABLE.

MATERIAL SAFETY DATA SHEET

Renown Gum Remover II (REN05012-AM / 880269)

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Renown Gum Remover II (REN05012-AM / 880269)
Product Number:	A00183
Product Use:	Specialty.
Manufacturer/Supplier:	Interline Brands 701 San Marco Blvd. Jacksonville, FL 32207
Phone Number:	1-866-412-6726
D.O.T. Emergency Phone:	Chemtrec 1-800-424-9300
Date of Preparation:	August 17, 2012 **Revision #:** 2.0

Section 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW **HMIS:** See Section 15

DANGER

EXTREMELY FLAMMABLE. HARMFUL BY INHALATION. MAY CAUSE EYE IRRITATION. MAY CAUSE SKIN IRRITATION. CONTENTS UNDER PRESSURE. CONTAINER MAY EXPLODE IF HEATED.

Potential Health Effects: See Section 11 for more information.

Likely Routes of Exposure: Skin contact, eye contact, inhalation, and ingestion.

Eye: May cause eye irritation.

Skin: May cause skin irritation.

Ingestion: Not a normal route of exposure.

Inhalation: Harmful by inhalation. May cause respiratory tract irritation. May cause asphyxiation.

Chronic Effects: Prolonged or repeated contact may dry skin and cause irritation.

Signs and Symptoms: Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. Handling can cause dry skin. Vapours may cause drowsiness and dizziness.

Medical Conditions Aggravated By Exposure: Asthma. Allergies.

Target Organs: Skin, eyes, gastrointestinal tract, respiratory system.

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential Environmental Effects: May cause long-term adverse effects in the aquatic environment. See Section 12 for more information.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS #	Wt. %
Isobutane	75-28-5	60 - 100
Propane	74-98-6	10 - 30

Section 4: FIRST AID MEASURES

Eye Contact: In case of contact, immediately flush eyes with plenty of water. If easy to do, remove contact lenses, if worn.

Skin Contact: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

General Advice: In case of accident or if you feel unwell, seek medical advice immediately (show the label or MSDS where possible).

Note to Physicians: Symptoms may not appear immediately.

Section 5: FIRE FIGHTING MEASURES

Flammability: Extremely flammable by OSHA criteria.

Means of Extinction:

Suitable Extinguishing Media: Powder, water spray, foam, carbon dioxide.

Unsuitable Extinguishing Media: Not available.

Products of Combustion: May include, and are not limited to: oxides of carbon.

Explosion Data:

Sensitivity to Mechanical Impact: Not available.

Sensitivity to Static Discharge: Not available.

Protection of Firefighters: Containers may explode when heated. Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate sources of ignition. Ruptured cylinders may rocket.

Environmental Precautions: Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Keep out of drains, sewers, ditches, and waterways. Minimize use of water to prevent environmental contamination.

Methods for Containment: Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for Clean-Up: Vacuum or sweep material and place in a disposal container. Provide ventilation.

Other Information: Not available.

Section 7: HANDLING AND STORAGE

Handling:
Keep away from sources of ignition. No smoking. Avoid contact with skin and eyes. Do not swallow. Do not breathe gas/fumes/vapor/spray. Use only in well-ventilated areas. Handle container with care. When using do not eat or drink. Wash hands before eating, drinking, or smoking.

Storage:
Keep out of the reach of children. Keep container tightly closed and in a well-ventilated place. Do not store at temperatures above 49 ℃ / 120 ℉. Keep aw ay from food, drink and animal feedingstuffs.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

	Exposure Limits	
Ingredient	**OSHA-PEL**	**ACGIH-TLV**
Isobutane	Not available.	1000 ppm
Propane	1000 ppm	1000 ppm

Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Personal Protective Equipment: **HMIS:** See Section 15

Eye/Face Protection: Wear eye/face protection.

Hand Protection: Wear suitable gloves.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment.

General Hygiene Considerations: Handle according to established industrial hygiene and safety practices.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear.
Color:	Colorless.
Odor:	Odorless.
Odor Threshold:	Not available.
Physical State:	Gas/Pressurized Liquid.
pH:	Not available.
Viscosity:	Not available.
Freezing Point:	Not available.
Boiling Point:	~ -43.7 ℃ (~ -47 ℉)
Flash Point:	~ -104 ℃ (~ -155 ℉)
Evaporation Rate:	> 1 (Water = 1)
Lower Flammability Limit:	2.0%
Upper Flammability Limit:	10.0%
Vapor Pressure:	70-80 PSIG @ 21℃ (70℉)

Vapor Density:	> 1 (Air = 1)
Specific Gravity:	0.555 (Concentrate only)
Solubility in Water:	Negligible.
Coefficient of Water/Oil Distribution:	Not available.
Auto-ignition Temperature:	Not available.
Percent Volatile, wt. %:	Not available.
VOC content, wt. %:	100% (US federal/CARB/OTC/LADCO)
VOC content, g/L:	Not available.

Section 10: STABILITY AND REACTIVITY

Stability: Stable under normal storage conditions. Contents under pressure. Container may explode if heated. Do not puncture. Do not burn. Keep in a cool place.

Conditions of Reactivity: Heat. Incompatible materials.

Incompatible Materials: Oxidizers.

Hazardous Decomposition Products: May include, and are not limited to: oxides of carbon.

Possibility of Hazardous Reactions: No dangerous reaction known under conditions of normal use.

Section 11: TOXICOLOGY INFORMATION

EFFECTS OF ACUTE EXPOSURE

Component Analysis

Ingredient	LD_{50} (oral)	LC_{50}
Isobutane	Not available.	658 mg/L 4hr, rat
Propane	Not available.	658 mg/L 4hr, rat

Eye: May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Skin: May cause skin irritation. Handling can cause dry skin.

Ingestion: Not a normal route of exposure.

Inhalation: Harmful by inhalation. May cause respiratory tract irritation. May cause asphyxiation. Vapours may cause drowsiness and dizziness.

EFFECTS OF CHRONIC EXPOSURE

Target Organs: Not available.

Chronic Effects: Not hazardous by OSHA criteria.

Carcinogenicity: Not hazardous by OSHA criteria.

Ingredient	Chemical Listed as Carcinogen or Potential Carcinogen *
Isobutane	Not listed.
Propane	Not listed.

* See Section 15 for more information.

Mutagenicity: Not hazardous by OSHA criteria.

Reproductive Effects: Not hazardous by OSHA criteria.

Developmental Effects:

Teratogenicity: Not hazardous by OSHA criteria.

Embryotoxicity: Not hazardous by OSHA criteria.

Respiratory Sensitization: Not hazardous by OSHA criteria.

Skin Sensitization: Not hazardous by OSHA criteria.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: May cause long-term adverse effects in the aquatic environment.

Persistence / Degradability: Not available.

Bioaccumulation / Accumulation: Not available.

Mobility in Environment: Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions:
This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

Section 14: TRANSPORTATION INFORMATION

DOT Classification
ORM-D, Limited Quantity

Section 15: REGULATORY INFORMATION

Federal Regulations

US: MSDS prepared pursuant to the Hazard Communication Standard (29 CFR 1910.1200).

SARA Title III

Ingredient	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313
Isobutane	Not listed.	Not listed.	Not listed.	Not listed.
Propane	Not listed.	Not listed.	Not listed.	Not listed.

State Regulations

California Proposition 65:
This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

Global Inventories

Ingredient	USA TSCA
Isobutane	Yes.
Propane	Yes.

HMIS - Hazardous Materials Identification System

Health - 1 **Flammability -** 4 **Physical Hazard -** 0 **PPE –** B

NFPA - National Fire Protection Association:

Health - 1 **Fire -** 4 **Reactivity -** 0

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

OSHA (O) Occupational Safety and Health Administration.

ACGIH (G) American Conference of Governmental Industrial Hygienists.
A1 - Confirmed human carcinogen.
A2 - Suspected human carcinogen.
A3 - Animal carcinogen.
A4 - Not classifiable as a human carcinogen.
A5 - Not suspected as a human carcinogen.

IARC (I) International Agency for Research on Cancer.
1 - The agent (mixture) is carcinogenic to humans.
2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

NTP (N) National Toxicology Program.
1 - Known to be carcinogens.
2 - Reasonably anticipated to be carcinogens.

Section 16: OTHER INFORMATION

Disclaimer:
We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

Prepared by: Nexreg Compliance Inc.
Prepared for: Interline Brands
1-866-412-6726

MATERIAL SAFETY DATA SHEET

Renown Penetrating Oil (REN05018-AM / 880275)

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Renown Penetrating Oil (REN05018-AM / 880275)
Product Number:	A00390
Product Use:	Penetrant / Lubricant.
Manufacturer/Supplier:	Interline Brands 701 San Marco Blvd. Jacksonville, FL 32207
Phone Number:	1-866-412-6726
D.O.T. Emergency Phone:	Chemtrec 1-800-424-9300
Date of Preparation:	September 24, 2010 **Revision #:** 2.1

Section 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW **HMIS:** See Section 15

WARNING

TOXIC BY INHALATION. MAY CAUSE EYE IRRITATION. MAY CAUSE SKIN IRRITATION. CONTENTS UNDER PRESSURE. CONTAINER MAY EXPLODE IF HEATED.

Potential Health Effects: See Section 11 for more information.

Likely Routes of Exposure: Skin contact, eye contact, inhalation, and ingestion.

Eye: May cause eye irritation.

Skin: May cause skin irritation.

Ingestion: Not a normal route of exposure. Harmful: may cause lung damage if swallowed.

Inhalation: Toxic by inhalation. May cause respiratory tract irritation. May cause asphyxiation. This product may be aspirated into the lungs and cause chemical pneumonitis.

Chronic Effects: Prolonged or repeated contact may dry skin and cause irritation.

Signs and Symptoms: Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. Handling can cause dry skin. Vapours may cause drowsiness and dizziness.

Medical Conditions Aggravated By Exposure: Asthma. Allergies.

Target Organs: Skin, eyes, gastrointestinal tract, respiratory system.

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential Environmental Effects: May cause long-term adverse effects in the aquatic environment. See Section 12 for more information.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS #	Wt. %
Perchloroethylene	127-18-4	30 - 60
Stoddard solvent	8052-41-3	10 - 30
Trichloroethylene	79-01-6	5 - 10
Sulfonic acids, petroleum, calcium salts	61789-86-4	1 - 5
Carbon dioxide	124-38-9	1 - 5

Section 4: FIRST AID MEASURES

Eye Contact: In case of contact, immediately flush eyes with plenty of water. If easy to do, remove contact lenses, if worn.

Skin Contact: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

General Advice: In case of accident or if you feel unwell, seek medical advice immediately (show the label or MSDS where possible).

Note to Physicians: Symptoms may not appear immediately.

Section 5: FIRE FIGHTING MEASURES

Flammability: Not flammable by OSHA criteria.

Means of Extinction:

Suitable Extinguishing Media: Powder, foam, carbon dioxide.

Unsuitable Extinguishing Media: Water.

Products of Combustion: May include, and are not limited to: oxides of carbon, oxides of sulfur, HCl, chlorine, small amounts of phosgene and hydrogen fluoride.

Explosion Data:

Sensitivity to Mechanical Impact: Not available.

Sensitivity to Static Discharge: Not available.

Protection of Firefighters: Containers may explode when heated. Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate sources of ignition. Ruptured cylinders may rocket.

Environmental Precautions: Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). This material is a water pollutant. Keep out of drains, sewers, ditches, and waterways. Minimize use of water to prevent environmental contamination.

Methods for Containment: Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for Clean-Up: Vacuum or sweep material and place in a disposal container. Allow gas to dissipate harmlessly into the atmosphere.

Other Information: Not available.

Section 7: HANDLING AND STORAGE

Handling:
Keep away from sources of ignition. No smoking. Avoid contact with skin and eyes. Do not swallow. Do not breathe gas/fumes/vapor/spray. Use only in well-ventilated areas. Handle and open container with care. When using, do not eat or drink. Wash hands before eating, drinking, or smoking.

Storage:
Keep out of the reach of children. Keep container in a well-ventilated place. Do not store at temperatures above 49℃ / 120℉.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Ingredient	Exposure Limits OSHA-PEL
Perchloroethylene	25 ppm
Stoddard solvent	100 ppm
Trichloroethylene	100 ppm
Sulfonic acids, petroleum, calcium salts	Not available.
Carbon dioxide	5000 ppm

Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Personal Protective Equipment: **HMIS:** See Section 15

Eye/Face Protection: Wear eye/face protection.

Hand Protection: Wear suitable gloves.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment.

General Hygiene Considerations: Handle according to established industrial hygiene and safety practices.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Opaque.
Color:	Brown.
Odor:	Solvent.
Odor Threshold:	Not available.
Physical State:	Gas/Pressurized Liquid.
pH:	Not applicable.
Viscosity:	Not available.
Freezing Point:	Not available.
Boiling Point:	Not available.
Flash Point:	Not available.
Evaporation Rate:	Not available.
Lower Flammability Limit:	Not available.
Upper Flammability Limit:	Not available.

Vapor Pressure:	Not available.
Vapor Density:	Not available.
Specific Gravity:	1.210 (Concentrate only)
Solubility in Water:	Insoluble.
Coefficient of Water/Oil Distribution:	Not available.
Auto-ignition Temperature:	Not available.
Percent Volatile, wt. %:	Not available.
VOC content, wt. %:	27.9% (US federal/CARB/OTC/LADCO)
VOC content, g/L:	Not available.

Section 10: STABILITY AND REACTIVITY

Stability: Stable under normal storage conditions. Contents under pressure. Container may explode if heated. Do not puncture. Do not burn. Keep in a cool place.

Conditions of Reactivity: Heat. Incompatible materials.

Incompatible Materials: Oxidizers. Aluminum. Magnesium. Contact with reactive metals.

Hazardous Decomposition Products: May include, and are not limited to: oxides of carbon, oxides of sulfur, HCl, chlorine, small amounts of phosgene and hydrogen fluoride.

Possibility of Hazardous Reactions: No dangerous reaction known under conditions of normal use.

Section 11: TOXICOLOGY INFORMATION

EFFECTS OF ACUTE EXPOSURE

Component Analysis

Ingredient	LD_{50} (oral)	LC_{50}
Perchloroethylene	2629 mg/kg, rat	4000 ppm 4hr, rat
Stoddard solvent	> 5000 mg/kg, rat	> 5500 mg/m³ 4hr, rat
Trichloroethylene	4290 mg/kg, rat	8000 ppm 4hr, rat
Sulfonic acids, petroleum, calcium salts	> 5000 mg/kg ,rat	Not available.
Carbon dioxide	Not available.	Not available.

Eye: May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Skin: May cause skin irritation. Handling can cause dry skin.

Ingestion: Not a normal route of exposure. Harmful: may cause lung damage if swallowed.

Inhalation: Toxic by inhalation. May cause respiratory tract irritation. May cause asphyxiation. This product may be aspirated into the lungs and cause chemical pneumonitis. Vapours may cause drowsiness and dizziness.

EFFECTS OF CHRONIC EXPOSURE

Target Organs: Not available.

Chronic Effects: (Effects due to excessive exposure to the raw materials of this mixture) May cause liver abnormalities, kidney, spleen, lung or brain damage, cardiac abnormalities. Perchloroethylene has been shown to increase the rate of spontaneously occurring malignant tumors in certain laboratory rats and mice.

Carcinogenicity: Hazardous by OSHA criteria.

Ingredient	Chemical Listed as Carcinogen or Potential Carcinogen *
Perchloroethylene	G-A3, I-2A, N-2, CP65
Stoddard solvent	Not listed.
Trichloroethylene	G-A2, I-2A, N-2, CP65
Sulfonic acids, petroleum, calcium salts	Not listed.
Carbon dioxide	Not listed.

* See Section 15 for more information.

Mutagenicity: Hazardous by OSHA criteria.

Reproductive Effects: Not hazardous by OSHA criteria.

Developmental Effects:

Teratogenicity: Not hazardous by OSHA criteria.

Embryotoxicity: Not hazardous by OSHA criteria.

Respiratory Sensitization: Not hazardous by OSHA criteria.

Skin Sensitization: Not hazardous by OSHA criteria.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: May cause long-term adverse effects in the aquatic environment

Persistence / Degradability: Not available.

Bioaccumulation / Accumulation: Not available.

Mobility in Environment: Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions:
This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

Section 14: TRANSPORTATION INFORMATION

DOT Classification
ORM-D

Section 15: REGULATORY INFORMATION

Federal Regulations

US: MSDS prepared pursuant to the Hazard Communication Standard (29 CFR 1910.1200).

SARA Title III

Ingredient	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313
Perchloroethylene	Not listed.	Not listed.	100	313
Stoddard solvent	Not listed.	Not listed.	Not listed.	Not listed.
Trichloroethylene	Not listed.	Not listed.	100	313
Sulfonic acids, petroleum, calcium salts	Not listed.	Not listed.	Not listed.	Not listed.
Carbon dioxide	Not listed.	Not listed.	Not listed.	Not listed.

State Regulations

California Proposition 65:
This product contains chemicals known to the state of California to cause cancer.

Global Inventories

Ingredient	USA TSCA
Perchloroethylene	Yes.
Stoddard solvent	Yes.
Trichloroethylene	Yes.
Sulfonic acids, petroleum, calcium salts	Yes.
Carbon dioxide	Yes.

HMIS - Hazardous Materials Identification System

Health - 2***** **Flammability -** 0 **Physical Hazard -** 0 **PPE –** B

NFPA - National Fire Protection Association:

Health - 2 **Fire -** 0 **Reactivity -** 0

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

OSHA (O) Occupational Safety and Health Administration.

ACGIH (G) American Conference of Governmental Industrial Hygienists.
A1 - Confirmed human carcinogen.
A2 - Suspected human carcinogen.
A3 - Animal carcinogen.
A4 - Not classifiable as a human carcinogen.
A5 - Not suspected as a human carcinogen.

IARC (I) International Agency for Research on Cancer.
1 - The agent (mixture) is carcinogenic to humans.
2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

NTP (N) National Toxicology Program.
1 - Known to be carcinogens.
2 - Reasonably anticipated to be carcinogens.

Section 16: OTHER INFORMATION

Disclaimer:
We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

Prepared by: Nexreg Compliance Inc.
Prepared for: Interline Brands
1-866-412-6726

MATERIAL SAFETY DATA SHEET

Renown Waterbased Stainless Steel Cleaner (REN05006-AM / 880263)

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Renown Waterbased Stainless Steel Cleaner (REN05006-AM / 880263)
Product Number:	A00142
Product Use:	Cleaner.
Manufacturer/Supplier:	Interline Brands 701 San Marco Blvd. Jacksonville, FL 32207
Phone Number:	1-866-412-6726
D.O.T. Emergency Phone:	Chemtrec 1-800-424-9300
Date of Preparation:	August 30, 2010 **Revision #:** 2.1

Section 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW **HMIS:** See Section 15

DANGER

EXTREMELY FLAMMABLE. HARMFUL BY INHALATION. MAY CAUSE EYE IRRITATION. MAY CAUSE SKIN IRRITATION. CONTENTS UNDER PRESSURE. CONTAINER MAY EXPLODE IF HEATED.

Potential Health Effects: See Section 11 for more information.

Likely Routes of Exposure: Skin contact, eye contact, inhalation, and ingestion.

Eye: May cause eye irritation.

Skin: May cause skin irritation.

Ingestion: Not a normal route of exposure. Harmful: may cause lung damage if swallowed.

Inhalation: Harmful by inhalation. May cause respiratory tract irritation. May cause asphyxiation. This product may be aspirated into the lungs and cause chemical pneumonitis.

Chronic Effects: Prolonged or repeated contact may dry skin and cause irritation.

Signs and Symptoms: Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. Handling can cause dry skin. Vapours may cause drowsiness and dizziness.

Medical Conditions Aggravated By Exposure: Asthma. Allergies.

Target Organs: Skin, eyes, gastrointestinal tract, respiratory system.

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential Environmental Effects: May cause long-term adverse effects in the aquatic environment. See Section 12 for more information.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS #	Wt. %
Distillates (petroleum), hydrotreated light	64742-47-8	7 - 13
Stoddard solvent	8052-41-3	3 - 7
Isobutane	75-28-5	3 - 7
Propane	74-98-6	1 - 5

Section 4: FIRST AID MEASURES

Eye Contact: In case of contact, immediately flush eyes with plenty of water. If easy to do, remove contact lenses, if worn.

Skin Contact: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

General Advice: In case of accident or if you feel unwell, seek medical advice immediately (show the label or MSDS where possible).

Note to Physicians: Symptoms may not appear immediately.

Section 5: FIRE FIGHTING MEASURES

Flammability: Flammable by OSHA criteria.

Means of Extinction:

Suitable Extinguishing Media: Powder, foam, carbon dioxide.

Unsuitable Extinguishing Media: Water.

Products of Combustion: May include, and are not limited to: oxides of carbon, traces of sulfur and zinc, unknown organic components.

Explosion Data:

Sensitivity to Mechanical Impact: Not available.

Sensitivity to Static Discharge: Not available.

Protection of Firefighters: Containers may explode when heated. Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate sources of ignition. Ruptured cylinders may rocket.

Environmental Precautions: Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). This material is a water pollutant. Keep out of drains, sewers, ditches, and waterways. Minimize use of water to prevent environmental contamination.

Methods for Containment: Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for Clean-Up: Vacuum or sweep material and place in a disposal container. Allow gas to dissipate harmlessly into the atmosphere.

Other Information: Not available.

Section 7: HANDLING AND STORAGE

Handling:
Keep away from sources of ignition. - No smoking. Avoid contact with skin and eyes. Do not swallow. Do not breathe gas/fumes/vapor/spray. Use only in well-ventilated areas. Handle and open container with care. When using, do not eat or drink. Wash hands before eating, drinking, or smoking.

Storage:
Keep out of the reach of children. Keep container in a well-ventilated place. Do not store at temperatures above 49℃ / 120℉.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

	Exposure Limits	
Ingredient	**OSHA-PEL**	**ACGIH-TLV**
Distillates (petroleum), hydrotreated light	100 ppm	200 mg/m³
Stoddard solvent	100 ppm	100 ppm
Isobutane	Not available.	Not available.
Propane	1000 ppm	1000 ppm

Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Personal Protective Equipment: **HMIS:** See Section 15

Eye/Face Protection: Wear eye/face protection.

Hand Protection: Wear suitable gloves.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment.

General Hygiene Considerations: Handle according to established industrial hygiene and safety practices.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Opaque.
Color:	Cream.
Odor:	Citrus.
Odor Threshold:	Not available.
Physical State:	Gas/Pressurized Liquid.
pH:	Not applicable.
Viscosity:	Not available.
Freezing Point:	Not available.
Boiling Point:	Not available.
Flash Point:	Not available.
Evaporation Rate:	Not available.
Lower Flammability Limit:	Not available.
Upper Flammability Limit:	Not available.
Vapor Pressure:	Not available.

Vapor Density:	Not available.
Specific Gravity:	0.938 (Concentrate only)
Solubility in Water:	Partial.
Coefficient of Water/Oil Distribution:	Not available.
Auto-ignition Temperature:	Not available.
Percent Volatile, wt. %:	Not available.
VOC content, wt. %:	16.5% (US federal/CARB/OTC/LADCO)
VOC content, g/L:	Not available.

Section 10: STABILITY AND REACTIVITY

Stability: Stable under normal storage conditions. Contents under pressure. Container may explode if heated. Do not puncture. Do not burn. Keep in a cool place.

Conditions of Reactivity: Heat. Incompatible materials.

Incompatible Materials: Oxidizers.

Hazardous Decomposition Products: May include, and are not limited to: oxides of carbon, traces of sulfur and zinc, unknown organic components.

Possibility of Hazardous Reactions: No dangerous reaction known under conditions of normal use.

Section 11: TOXICOLOGY INFORMATION

EFFECTS OF ACUTE EXPOSURE

Component Analysis

Ingredient	LD_{50} (oral)	LC_{50}
Distillates (petroleum), hydrotreated light	> 5000 mg/kg, rat	> 5.2 mg/L 4hr, rat
Stoddard solvent	> 5000 mg/kg, rat	> 5500 mg/m³ 4hr, rat
Isobutane	Not available.	658 mg/L 4hr, rat
Propane	Not available.	658 mg/L 4hr, rat

Eye: May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Skin: May cause skin irritation. Handling can cause dry skin.

Ingestion: Not a normal route of exposure. Harmful: may cause lung damage if swallowed.

Inhalation: Harmful by inhalation. May cause respiratory tract irritation. May cause asphyxiation. This product may be aspirated into the lungs and cause chemical pneumonitis. Vapours may cause drowsiness and dizziness.

EFFECTS OF CHRONIC EXPOSURE

Target Organs: Not available.

Chronic Effects: Not hazardous by OSHA criteria.

Carcinogenicity: Not hazardous by OSHA criteria.

Ingredient	Chemical Listed as Carcinogen or Potential Carcinogen *
Distillates (petroleum), hydrotreated light	I -3, G-A3
Stoddard solvent	Not listed.
Isobutane	Not listed.
Propane	Not listed.

* See Section 15 for more information.

Mutagenicity: Not hazardous by OSHA criteria.

Reproductive Effects: Not hazardous by OSHA criteria.

Developmental Effects:

Teratogenicity: Not hazardous by OSHA criteria.

Embryotoxicity: Not hazardous by OSHA criteria.

Respiratory Sensitization: Not hazardous by OSHA criteria.

Skin Sensitization: Not hazardous by OSHA criteria.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: May cause long-term adverse effects in the aquatic environment

Persistence / Degradability: Not available.

Bioaccumulation / Accumulation: Not available.

Mobility in Environment: Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions:
This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

Section 14: TRANSPORTATION INFORMATION

DOT Classification
ORM-D

Section 15: REGULATORY INFORMATION

Federal Regulations

US: MSDS prepared pursuant to the Hazard Communication Standard (29 CFR 1910.1200).

SARA Title III

Ingredient	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313
Distillates (petroleum), hydrotreated light	Not listed.	Not listed.	Not listed.	Not listed.
Stoddard solvent	Not listed.	Not listed.	Not listed.	Not listed.
Isobutane	Not listed.	Not listed.	Not listed.	Not listed.
Propane	Not listed.	Not listed.	Not listed.	Not listed.

State Regulations

California Proposition 65:
This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

Global Inventories

Ingredient	USA TSCA
Distillates (petroleum), hydrotreated light	Yes.
Stoddard solvent	Yes.
Isobutane	Yes.
Propane	Yes.

HMIS - Hazardous Materials Identification System

Health - 2 **Flammability -** 2 **Physical Hazard -** 0 **PPE –** B

NFPA - National Fire Protection Association:

Health - 2 **Fire -** 2 **Reactivity -** 0

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

OSHA (O) Occupational Safety and Health Administration.

ACGIH (G) American Conference of Governmental Industrial Hygienists.
A1 - Confirmed human carcinogen.
A2 - Suspected human carcinogen.
A3 - Animal carcinogen.
A4 - Not classifiable as a human carcinogen.
A5 - Not suspected as a human carcinogen.

IARC (I) International Agency for Research on Cancer.
1 - The agent (mixture) is carcinogenic to humans.
2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

NTP (N) National Toxicology Program.
1 - Known to be carcinogens.
2 - Reasonably anticipated to be carcinogens.

Section 16: OTHER INFORMATION

Disclaimer:
We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

Prepared by: Nexreg Compliance Inc.
Prepared for: Interline Brands
1-866-412-6726

Date: 1 January 2009
Supercedes: 11 April 2006

MATERIAL SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION AND COMPANY IDENTIFICATION:

Product Name:	***REN02503*** ***RENOWN White Hand Soap***
Company Name & Address:	AmSan 5727 South Lewis Ave. Tulsa, OK 74105
Emergency Phone:	**1-800-255-3924**
Non-Emergency Phone:	1-888-468-1555
MSDS Request Phone:	1-888-468-1555

2. INFORMATION ON INGREDIENTS:

HAZARDOUS INGREDIENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	% RANGE
None				

Other ingredient(s) with notification requirements:	CAS NUMBER	List
Sodium Lauryl Sulfate	151-21-3	CN 1
Ammonium Chloride	12125-02-9	PA 1

3. HAZARDS IDENTIFICATION:

EMERGENCY OVERVIEW

When used according to instructions, the product applicable to this MSDS is safe and presents no immediate or long-term health hazard. However, abnormal entry routes, such as gross ingestion, may require immediate medical attention.

Potential Health Effects:

HMIS: Health 1 Flammability 0 Reactivity 0 Personal Protection None

Eye Contact:	May cause eye irritation.
Skin Contact:	No irritation or reaction expected.
Inhalation:	Not applicable.
Ingestion:	May cause upset stomach, nausea (Abnormal entry route).
Carcinogenicity:	Not listed as a carcinogen by NTP, IARC, OSHA or ACGIH.

4. FIRST AID MEASURES:

Eye Contact:	Do not rub eyes. Flush eyes thoroughly with water for 15 minutes. If condition worsens or irritation persists, contact physician.
Skin Contact:	Not applicable.
Inhalation:	Not applicable.
Ingestion:	Do not induce vomiting. Contact a physician or Poison Control Center.

5. FIRE FIGHTING MEASURES:

NFPA: Health __0__ Fire __0__ Reactivity __0__

Flashpoint °F/°C (PMCC method): Not determined.
Unusual Fire and Explosion Hazards: None known.
Special Fire Fighting Procedures: None known.
Extinguishing Media: __X__ Water Fog __X__ Alcohol Foam __X__ CO_2 __X__ Dry Chemical ____ Other

6. ACCIDENTAL RELEASE MEASURES:

No special requirements. Water clean up and rinse. CAUTION – WILL CAUSE SLIPPERY SURFACES.

7. HANDLING AND STORAGE:

Store at normal room temperature away from reach of small children. Keep containers sealed. Use older containers first. Avoid freezing conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Eye Protection:	None required under normal conditions.
Skin Protection:	None required under normal conditions.
Respiratory Protection:	None required under normal conditions.
Ventilation:	None required under normal conditions.
Protective Equipment or Clothing:	None required under normal conditions.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance and Odor	White pearlescent liquid, coconut fragrance
pH (undiluted):	4.5 – 9.5
VOC , %:	0

10. STABILITY AND REACTIVITY:

Stable/Non reactive product.

11. TOXICOLOGICAL INFORMATION:

No acute or chronic toxic effects expected when used according to directions.

12. ECOLOGICAL CONSIDERATIONS:

No ecological or special considerations when used according to directions. Not considered environmentally harmful from normal dilution, expected usage and typical drainage to sewers, septic systems and treatment plants.

13. DISPOSAL CONSIDERATIONS:

No special considerations when disposed according to local, state and Federal regulations.

14. TRANSPORT INFORMATION:

Not classified as a hazardous material.

15. REGULATORY AND OTHER INFORMATION:

TSCA: All ingredients are listed or exempt per reference 15 USC 2602 (2)(B)(iv).

Complies with current FDA regulations for cosmetic and/or over-the-counter drug products.

Notice: The information herein is based on data considered to be accurate as of the date of preparation of this material safety data sheet. However, no warranty or representation, expressed or implied, is made as to the accuracy or completeness of the foregoing data and safety information. The user assumes all liability for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product.

NATIONAL LABORATORIES -- 01-00422-000, RESOLVE PROCARE GENERAL PURPOSE (SUDAT) -- 7930-00N072905

========== Product Identification ==========

Product ID:01-00422-000, RESOLVE PROCARE GENERAL PURPOSE (SUDAT)
MSDS Date:04/18/1994
FSC:7930
NIIN:00N072905
MSDS Number: CBZDV
=== Responsible Party ===
Company Name:NATIONAL LABORATORIES
Address:225 SUMMIT AVENUE
City:MONTVALE
State:NJ
ZIP:07645
Country:US
Info Phone Num:201-573-5700
Emergency Phone Num:800-424-9300 (CHEMTREC)
CAGE:63180
=== Contractor Identification ===
Company Name:RECKITT AND COLMAN INC
Address:1655 VALLEY ROAD
Box:City:WAYNE
State:NJ
ZIP:07474
Country:US
Phone:800-338-6167
CAGE:63180

========== Composition/Information on Ingredients ==========

Ingred Name:ISOPROPYL ALCOHOL (SARA 313)
CAS:67-63-0
RTECS #:NT8050000
Fraction by Wt: 2%
OSHA PEL:400 PPM
ACGIH TLV:400 PPM/500STEL;9495

========== Hazards Identification ==========

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.
Routes of Entry: Inhalation:NO Skin:NO Ingestion:NO
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:ACUTE: INHALATION: NONE EXPECTED.
SKIN: NONE EXPECTED. EYE: NONE KNOWN. INGESTION: NONE EXPECTED.
CHRONIC: NONE SPECIFIED BY MANUFACTURER.
Explanation of Carcinogenicity:NOT RELEVANT.
Effects of Overexposure:SEE HEALTH HAZARDS.
Medical Cond Aggravated by Exposure:NONE KNOWN.

========== First Aid Measures ==========

First Aid:INHAL: REMOVE TO FRESH AIR. SUPPORT BREATHING (GIVE O*2/ARTF RESP) . SKIN: IN KEEPING WITH GOOD HYGIENIC PRACTICES, WASH THOROUGHLY WITH SOAP AND WATER. EYES: IF NECESSARY, REMOVE ANY CONTACT LE NSES AND FLUSH THOROUGHLY WITH WATER FOR AT LEAST 15 MINUTES. INGESTION: CONTACT A PHYSICIAN.

Fire Fighting Measures

Flash Point Method:PMCC
Flash Point:>200F,>93C
Extinguishing Media:USE WATER SPRAY, FOAM, DRY CHEMICAL OR CARBON DIOXIDE AS SUITABLE FOR THE SURROUNDING FIRE.
Fire Fighting Procedures:NONE REQUIRED. USE NIOSH APPROVED SCBA & FULL PROTECTIVE EQUIPMENT .
Unusual Fire/Explosion Hazard:NONE KNOWN.

Accidental Release Measures

Spill Release Procedures:NONE SPECIFIED BY MANUFACTURER.
Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

Handling and Storage

Handling and Storage Precautions:NONE SPECIFIED BY MANUFACTURER.
Other Precautions:NONE SPECIFIED BY MANUFACTURER.

Exposure Controls/Personal Protection

Respiratory Protection:NIOSH APPROVED RESPIRATOR APPROPRIATE FOR EXPOSURE OF CONCERN .
Ventilation:NONE SPECIFIED BY MANUFACTURER.
Protective Gloves:IMPERVIOUS GLOVES .
Eye Protection:ANSI APPROVED CHEM WORKERS GOGGS .
Other Protective Equipment:EYE WASH FOUNTAIN & DELUGE SHOWER WHICH MEET ANSI DESIGN CRITERIA .
Work Hygienic Practices:NONE SPECIFIED BY MANUFACTURER.
Supplemental Safety and Health
MFR'S TRADE NAME/PART #: CARPET SPOT CLEANER.

Physical/Chemical Properties

Spec Gravity:1.0
pH:6.5
Evaporation Rate & Reference:< 1 (BUTYL ACETATE = 1)
Solubility in Water:COMPLETE
Appearance and Odor:CLEAR, WATER THIN, SLIGHTLY YELLOW LIQUID WITH CITRUS ODOR.

Stability and Reactivity Data

Stability Indicator/Materials to Avoid:YES
DO NOT MIX WITH BLEACH OR USE WITH OTHER CHEMICALS.
Stability Condition to Avoid:NONE.
Hazardous Decomposition Products:NONE SPECIFIED BY MANUFACTURER.

Disposal Considerations

Waste Disposal Methods:DISPOSAL MUST BE IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS .

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MATERIAL SAFETY DATA SHEET

(SIMILAR TO OSHA FORM 174)

N.A. = Not Applicable
Not Est. = Not Established
Prop. = Proprietary

SECTION 1 - MANUFACTURER / DISTRIBUTOR INFORMATION

Product Name: RID RUST Rust Stain Remover
Supplier's Name: National Chemical Laboratories of PA, Inc.
Supplier's Address: 401 N. 10th Street · Philadelphia PA 19123
HMIS Hazard Code: **Health:** 2 **Flammability:** 0 **Reactivity:** 0 **PPE:** C
Chemical Family: Rust Stain Remover
D.O.T. Shipping Name: ORM-D

Product #: 2512

Emergency Phone #: CHEM-TEL (800) 255-3924
Chemical Name: N.A. Proprietary Blend
Formula: N.A. Blended Product
Hazard Class: N/A **D.O.T. ID#:** N/A

SECTION 2 - HAZARDOUS INGREDIENTS

CHEMICAL NAME	CAS NUMBER	% Concentration Range	Hazard Ratings (TLV/PEL)
*Phosphoric Acid	7664-38-2	PROP.	751 mg/m^3
*Glycolic Acid	70-14-1	PROP.	Not Est.

* Components are reportable under SARA Title III

SECTION 3 - PHYSICAL DATA

Boiling Point (°F): N/A
Vapor Pressure: N/A
Vapor Density: N/A
Solubility in Water: Complete
Appearance: Clear liquid
Odor: Odorless

Specific Gravity: 1.107
Evaporation Rate (Butyl Acetate = 1): N/A
Melting Point: N/A

SECTION 4 - FIRE AND EXPLOSION DATA

Flash Point (°F): None
Flammable Limits: N/A
Extinguishing Media: None necessary
Special Fire Fighting Procedures: Cool material with water spray.
Unusual Fire & Explosion Hazards: None

SECTION 5 - HEALTH HAZARD DATA

Route(s) of Entry: **Inhalation:** Yes **Skin:** Yes **Ingestion:** Yes **Eyes:** Yes **Threshold Limit Value:** Not Est.
Emergency & First Aid Procedures: **For Eyes:** Flush eyes with water for at least fifteen minutes. Seek immediate medical attention. **If ingested:** Do not induce vomiting. Seek immediate medical attention. Never give anything by mouth to an unconscious person. **For Skin:** Wash thoroughly with soap and water. If irritation persists seek medical attention. **Inhalation:** Move to fresh air, seek medical attention.
Health Hazards (acute or chronic): None determined.
Carcinogenicity: NTP? IARC Monographs ? OSHA Regulated? NA
Signs and Symptoms of Exposure: Corrosive to skin and eyes causing chemical burns, respiratory irritation and possible injury from breathing mist.
Medical Conditions Generally Aggravated by Exposure: None determined

SECTION 6 - REACTIVITY DATA

Stability: Stable
Conditions to Avoid: N/A
Incompatibility: Can react with metals to liberate flammable hydrogen
Hazardous Polymerization: Will not occur

SECTION 7 - SPILL OR LEAK PROCEDURES

Steps to be taken if material is released or spilled: Flush with plenty of water or neutralize with soda and slated lime.
Waste disposal method: Dispose of in accordance with government regulations.

SECTION 8 - SPECIAL PROTECTION INFORMATION

Respiratory Protection: None required.
Ventilation: Local exhaust adequate. Special: None needed. Mechanical (general) adequate.
Protective Gloves: Recommended
Eye Protection: Goggles or safety glasses with side shields.
Other Protective Equipment: Face shield and rubber apron may be worn.
Work / Hygienic Practices: Normal good housekeeping and manufacturing procedures.

SECTION 9 – SPECIAL PRECAUTIONS

Precautions to be taken in handling and storage: Avoid contact with skin or eyes. When storing, make sure containers are not too full, under extremely hot conditions, allow room for expansion.
Other Precautions: None known. Keep out of reach of children. For professional use only.

The information contained in this MSDS was obtained from current and reliable sources, however the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions or handling, storage and disposal of this product are beyond the control of this company, it is not responsible for loss, injury and expense arising out of the product's improper use. No warranty, expressed or inferred, regarding the product described in this MSDS shall be created or inferred by any statement in this MSDS. Various government agencies may have specific regulations regarding the transportation, handling, storage, use or disposal of this product which may be covered by this MSDS. The user is responsible for full compliance.

Date Prepared – 10/05/11 By: J.B.

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 671.00

Revision Date: January 16, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Ringer's Solution

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **N/A**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium chloride	7447-40-7	KCl	74.56	0.01%
Sodium chloride	7647-14-5	NaCl	58.45	0.7%
Calcium chloride dihydrate	10035-04-8	$CaCl_2 \cdot 2H_2O$	147.02	0.01%
Sodium bicarbonate	144-55-8	$NaHCO_3$	84.007	0.01%
Water	7732-18-5	H_2O	18.00	99%

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless liquid. Odorless.
Contains: sodium chloride, potassium chloride, calcium chloride and sodium bicarbonate all in a water-based solution.

Isotonic biological solution.

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: January 16, 2014

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Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name: Spray N Go Aerosol Topcoats

Revision Date: 10/17/2006

Identification Number: 51101830, 51103830, 51104830, 51105830, 51106830, 51107830, 51108830, 51109830, 51110830, 51117830, 51125830, 51126830, 51135830, 51136830

Product Use/Class: Topocats/Aerosol

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Preparer: Regulatory Department

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Acetone	67-64-1	40.0	500 PPM	750 PPM	750 PPM	N.E.
Liquefied Petroleum Gas	68476-86-8	35.0	1000 PPM	N.E.	1000 PPM	N.E.
Toluene	108-88-3	20.0	50 PPM	150 PPM	200 PPM	300 PPM
Titanium Dioxide	13463-67-7	10.0	10 mg/m3	N.E.	10 mg/m3	N.E.
Naphtha	8032-32-4	10.0	300 PPM	N.E.	N.E.	N.E.
N-Butyl Acetate	123-86-4	10.0	150 PPM	200 PPM	150 PPM	N.E.
Stoddard Solvents	8052-41-3	10.0	100 PPM	N.E.	500 PPM	N.E.
Xylene	1330-20-7	10.0	100 PPM	150 PPM	100 PPM	N.E.
Aromatic Solvent	64742-95-6	10.0	N.E.	N.E.	N.E.	N.E.
Aliphatic Petroleum Distillates	64742-48-9	10.0	400 PPM	N.E.	400 PPM	N.E.
Magnesium Silicate	14807-96-6	5.0	10 mg/m3	N.E.	15 mg/m3	N.E.
Ethylbenzene	100-41-4	5.0	100 PPM	125 PPM	100 PPM	N.E.
Pigment Black 7	1333-86-4	5.0	3.5 mg/m3	N.E.	3.5 mg/m3	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Extremely flammable liquid and vapor. Harmful if swallowed.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage.

Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). May cause central nervous system disorder (e,g.,narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. Overexposure to toluene in laboratory animals has been associated with liver abnormalities, kidney, lung and spleen damage. Effects in humans have included liver and cardiac abnormalities.
Contains carbon black. Chronic inflammation, lung fibrosis, and lung tumors have been observed in some rats experimentally exposed for long periods of time to excessive concentrations of carbon black and several insoluble fine dust particles. Tumors have not been observed in other animal species (i.e., mouse and hampster) under similar circumstances and study conditions. Epidemiological studies of North American workers show no evidence of clinically significant adverse health effects due to occupational exposure to carbon black.
Carbon black is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC and is proposed to be listed as A4- "not classified as a human carcinogen" by the American Conference of Govermental Industrial Hygienists. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of carbon black in the formula.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Hold eyelids apart and flush with plenty of water for at least 15 minutes. Get medical attention.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F
(Setaflash)

LOWER EXPLOSIVE LIMIT: 0.7 %
UPPER EXPLOSIVE LIMIT : 32.5 %

Extinguishing Media: Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: Perforation of the pressurized container may cause bursting of the can. Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Wash hands before eating. Use only in a well-ventilated area. Wash thoroughly after handling. Avoid breathing vapor or mist. Follow all MSDS/label precautions even after container is emptied because it may retain product residues.

Storage: Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not expose to heat or store above 120 ° F.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment.

Respiratory Protection: A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Boiling Range:	-34 - 900 F	Vapor Density:	Heavier than air
Odor:	Solvent Like	Odor Threshold:	ND
Appearance:	Liquid	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight		
Freeze Point:	ND	Specific Gravity:	
Vapor Pressure:		PH:	NE
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition, it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Product LD50: ND

Product LC50: ND

Chemical Name	LD50	LC50
Acetone	N.D.	N.D.
Liquefied Petroleum Gas	N.D.	N.D.
Toluene	N.D.	N.D.
Titanium Dioxide	>7500 mg/kg (ORAL, RAT)	N.D.
Naphtha	>5000 mg/kg (ORAL, RAT)	N.D.
N-Butyl Acetate	13100 mg/kg (ORAL, RAT)	2000 PPM (INH 4 Hr, RAT)
Stoddard Solvents	N.D.	N.D.
Xylene	N.D.	N.D.
Aromatic Solvent	4700 mg/kg (ORAL, RAT)	3670 mg/kg (INH, RAT)
Aliphatic Petroleum Distillates	N.D.	N.D.
Magnesium Silicate	N.D.	TCLo:11mg/m3 inh.
Ethylbenzene	3500 mg/kg (ORAL, RAT)	N.D.
Pigment Black 7	>8000 mg/kg (ORAL, RAT)	N.D.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Aerosol	Packing Group:	---
DOT Technical Name:	---	Hazard Subclass:	---
DOT Hazard Class:	2.1	Resp. Guide Page:	126
DOT UN/NA Number:	UN1950		

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Toluene	108-88-3
Xylene	1330-20-7
Ethylbenzene	100-41-4

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None known

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Potassium Aluminosilicate	37244-96-5
Modified Alkyd	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Potassium Aluminosilicate	37244-96-5
Modified Alkyd	PROPRIETARY
Acrylic Copolymer	PROPRIETARY
Barium Sulfate	7727-43-7
Calcium Carbonate	1317-65-3

California Proposition 65:

WARNING! This product contains a chemical(s) known by the State of California to cause cancer.

WARNING! This product contains a chemical(s) known to the state of California to cause birth defects or other reproductive harm.

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5, D2A, D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2 Flammability: 4 Reactivity: 0 Personal Protection: X

VOLATILE ORGANIC COMPOUNDS, g/l: ---

REASON FOR REVISION:

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name: Touch N Tone Aerosol Topcoats

Revision Date: 10/17/2006

Identification Number: 55280830, 55270830, 55271830, 55272830, 55277830, 55278830, 55281830, 55285830, 55288830, 55289830, 55290830, 55274830, 55276830

Product Use/Class: Topcoats/Aerosol

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Preparer: Regulatory Department

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Acetone	67-64-1	45.0	500 PPM	750 PPM	750 PPM	N.E.
Liquefied Petroleum Gas	68476-86-8	35.0	1000 PPM	N.E.	1000 PPM	N.E.
Xylene	1330-20-7	10.0	100 PPM	150 PPM	100 PPM	N.E.
Magnesium Silicate	14807-96-6	10.0	10 mg/m3	N.E.	15 mg/m3	N.E.
Naphtha	8032-32-4	10.0	300 PPM	N.E.	N.E.	N.E.
Titanium Dioxide	13463-67-7	10.0	10 mg/m3	N.E.	10 mg/m3	N.E.
Aliphatic Petroleum Distillates	64742-48-9	5.0	400 PPM	N.E.	400 PPM	N.E.
Aromatic Solvent	64742-95-6	5.0	N.E.	N.E.	N.E.	N.E.
Toluene	108-88-3	5.0	50 PPM	150 PPM	200 PPM	300 PPM
Ethylbenzene	100-41-4	5.0	100 PPM	125 PPM	100 PPM	N.E.
Aliphatic Hydrocarbon	64742-89-8	5.0	300 PPM	N.E.	300 PPM	N.E.
Aromatic Hydrocarbon	64742-95-6	5.0	N.E.	N.E.	N.E.	N.E.
1,2,4-Trimethylbenzene	95-63-6	5.0	25 PPM	N.E.	N.E.	N.E.
Aromatic Petroleum Distillates	64742-94-5	5.0	10 PPM	N.E.	10 PPM	N.E.
Pigment Red 122	980-26-7	0.1	15mg/m3	N.E.	5mg/m3	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Extremely flammable liquid and vapor. Harmful if swallowed.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). May cause central nervous system disorder (e,g.,narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. Overexposure to toluene in laboratory animals has been associated with liver abnormalities, kidney, lung and spleen damage. Effects in humans have included liver and cardiac abnormalities.

Primary Route(s) Of Entry: Skin Contact, Inhalation, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Hold eyelids apart and flush with plenty of water for at least 15 minutes. Get medical attention.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F
(Setaflash)

LOWER EXPLOSIVE LIMIT: 0.7 %
UPPER EXPLOSIVE LIMIT : 32.5 %

Extinguishing Media: Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: Perforation of the pressurized container may cause bursting of the can. Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Wash hands before eating. Use only in a well-ventilated area. Wash thoroughly after handling. Avoid breathing vapor or mist. Follow all MSDS/label precautions even after container is emptied because it may retain product residues.

Storage: Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not expose to heat or store above 120 ° F.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment.

Respiratory Protection: A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Boiling Range:	-34 - 999 F	Vapor Density:	Heavier than air
Odor:	Solvent Like	Odor Threshold:	ND
Appearance:	Liquid	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight		
Freeze Point:	ND	Specific Gravity:	0.7330
Vapor Pressure:		PH:	NE
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition, it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Product LD50: ND

Product LC50: ND

Chemical Name	LD50	LC50
Acetone	N.D.	N.D.
Liquefied Petroleum Gas	N.D.	N.D.
Xylene	N.D.	N.D.
Magnesium Silicate	N.D.	TCLo:11mg/m3 inh.
Naphtha	>5000 mg/kg (ORAL, RAT)	N.D.
Titanium Dioxide	>7500 mg/kg (ORAL, RAT)	N.D.
Aliphatic Petroleum Distillates	N.D.	N.D.
Aromatic Solvent	4700 mg/kg (ORAL, RAT)	3670 mg/kg (INH, RAT)
Toluene	N.D.	N.D.
Ethylbenzene	3500 mg/kg (ORAL, RAT)	N.D.
Aliphatic Hydrocarbon	N.D.	N.D.
Aromatic Hydrocarbon	N.D.	N.D.
1,2,4-Trimethylbenzene	N.D.	18000 mg/m3 (RAT, 4 HR)
Aromatic Petroleum Distillates	4900 mg/kg (ORAL, RAT)	N.D.
Pigment Red 122	N.D.	N.D.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Aerosol	Packing Group:	---
DOT Technical Name:	---	Hazard Subclass:	---
DOT Hazard Class:	2.1	Resp. Guide Page:	126
DOT UN/NA Number:	UN1950		

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and

312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Xylene	1330-20-7
Toluene	108-88-3
Ethylbenzene	100-41-4
1,2,4-Trimethylbenzene	95-63-6
Aromatic Petroleum Distillates	64742-94-5

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None known

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY
Barium Sulfate	7727-43-7

California Proposition 65:

WARNING! This product contains a chemical(s) known by the State of California to cause cancer.

WARNING! This product contains a chemical(s) known to the state of California to cause birth defects or other reproductive harm.

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5, D2A, D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2 Flammability: 4 Reactivity: 0 Personal Protection: X

VOLATILE ORGANIC COMPOUNDS, g/l: N.A.

REASON FOR REVISION:

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.

N.A. = Not Applicable
Not Est. = Not Established
Prop. = Proprietary

MATERIAL SAFETY DATA SHEET
(Similar to OSHA FORM 174)

Section 1 - Manufacturer / Distributor Information

Product Name ROCK HARD™ Step1 - Stone Hardener **Product #** 2506
Supplier's Name National Chemical Laboratories of PA, Inc.
Supplier's Address 401 N. 10th Street - Philadelphia, PA 19123 **Emergency Phone No** 1 (800) 255-3924
HMIS Hazard Code **Health** 2 **Flammability** 0 **Phys Hazard** 1 **Chemical Name** N.A. Proprietary Blend
Chemical Family Blended Cleaner **Formula** N.A. Blended Product
DOT Shipping Name For containers > 1 gallon: CORROSIVE LIQUID, TOXIC N.O.S. (FLUOROSILICATES), 8 (6.1), PG III, UN2922
For containers <= 1 gallon: Consumer Commodity ORM-D (No Air-Freight)
Hazard Class
PKG Group
DOT ID #

Section 2 - Hazardous Ingredients

CHEMICAL NAME	CAS NUMBER	% Concentration Range	Exposure Limit ACGIH	Exposure Limit TLV/PEL
Magnesium hexafluorosilicate hexahydrate	18972-56-0	PROP.		2.5 mg/m3

Section 3 - Physical Data

Boiling Point (F) N/A **Specific Gravity** 1.06 ± 0.02
Vapor Pressure N/A **Evaporation Rate** N/A
Vapor Density N/A **pH**
Solubility in Wate Disperses **pH(1)**
Appearance Clear Colorless Liquid **pH(2)**
Odor Odorless **VOC Content**

Section 4 - Fire and Explosion Data

Flammable Limits N/A **LEL** **UEL**

Fire Fighting Equipment Cool material with water spray.

Extinguishing Media

Unusual Fire Explosion Hazards None

Hazardous Combustion Products

Section 5 - Health Hazard Data

Routes of Entry **Inhalation** ☑ **Skin** ☑ **Ingestion** ☑

Effects of Over exposure Corrosive to eyes and skin causing chemical burns, respiratory irritation and possible injury from breathing mist. May be fatal if large amounts are ingested.

Emergency and First Aid Procedures For Eyes: Flush eyes with water for at least fifteen minutes. If irritation persists seek medical attention. If ingested: Seek immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person. For Skin: Wipe off gently and immediately flood surface with water using soap freely. Then cover with moist baking soda or magnesia. If irritation persists seek medical attention. Inhalation: Move to fresh air, seek medical attention.

Conditions Aggravated by Exposure None determined **Threshold Limit Value** Not Est.

Listed Health Hazards (acute or chronic):: Corrosive to skin and eyes.
Carcinogenicity: NTP No IARC Monographs No OSHA Regulated No

Statement regarding Green Seal, Inc. Certification

Section 6 - Reactivity Data

Stability Stable
Conditions to Avoid None
Incompatibility Can react with metals to liberate flammable hydrogen
Flash Point (F) None to boiling (TOC)
Hazardous Polymerization Will not occur.
Hazardous Decomposition Products Carbon Oxides and Amines

Section 7 - Spill and Leak Procedures

Spill Steps Recontainerize by mopping, wet vacuum, or using a suitable absorbent. Be cautious of slippery floors.

Waste Disposal Method Follow local, state and federal regulations.

Section 8 - Special Protection Information

Respiratory Protection	NIOSH approved respirator for exposure exceeding limits cited in Section 2.
Ventilation	Local exhaust adequate. Special: None needed. Mechanical (general) adequate.
Protective Gloves	Water impervious, such as latex, nitrile or neoprene.
Eye Protection	Goggles or safety glasses with side shields.
Other Protective Equipment	Face shield and rubber apron may be worn.
Work /Hygenic Practices	Rubber boots should be worn if working in standing solution.

Section 9 - Special Precautions

Precautions Handling Storage	Avoid contact with skin and eyes. Store in sealed container, in cool dry location in a well ventilated area.
Other Precautions	Keep out of reach of children. For Commercial and Industrial Use Only.
CA Proposition 65 Statement	

The information contained in this MSDS was obtained from current and reliable sources, however the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions or handling, storage and disposal of this product are beyond the control of this company, it is not responsible for loss, injury and expense arising out of the product's improper use. No warranty, expressed or inferred, regarding the product described in this MSDS shall be created or inferred by any statement in this MSDS. Various government agencies may have specific regulations regarding the transportation, handling, storage, use or disposal of this product which may be covered by this MSDS. The user is responsible for full compliance

Date Prepared 4/23/2013 **Prepared By** J.B.

FACTS Faxed FAST!℠

OSHA-Required Health And Safety Information!

This Material Safety Data Sheet (MSDS) was requested moments ago from Hercules Automated Fax Information System. Please forward it immediately to the person in charge of MSDS's, or retain it at the machine until claimed.

Section 1

MATERIAL SAFETY DATA SHEET # 26
Roof & Flashing Sealant

HERCULES® MATERIAL SAFETY INFORMATION SERVICE℠

Date Prepared: 12/19/1989 **Last Reviewed:** 8/2/2010

Meets OSHA 29 CFR 1910.1200

Hercules Chemical Company Inc.
111 South Street
Passaic NJ 07055
Phone (800) 221-9330
Fax (800) 333-3456

Section 2 - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s), CAS Numbers)	OSHA PEL	ACGIH TLV	Other Limits	Upper Bound Limit if SARA Reportable
*These components are totally encapsulated in paste.				
Asphalt (8052-42-4)	400PPM	500PPM	N/A	- -
Mineral Spirits (64741-41-9)	400PPM	500PPM	N/A	- -
Attapulgite Clay (8031-18-3)*	N/A		N/A	- -
Active Cationic Salts (2871-67-9)*	N/A	N/A	N/A	- -
Cellulosic Fibers (9004-34-6)*	N//A	N/A	N/A	- -

HMIS Hazard Rating: Health: 2 Flammability: 2 Reactivity: 0 Personal Protection: C

Section 3 - Physical/Chemical Characteristics

Boiling Point (°F):	Specific Gravity (H2O = 1):	Vapor Density (Air = 1):	Vapor Pressure (mm Hg):
315	1.1	3.9	@20° C 1

Melting Point (° F):	Evaporation Rate: (Butyl Acetate = 1)	Solubility in Water:	
N/A	0.1	Negligible	**VOC Level (g/l) :** 300

Appearance And Color: Black paste **Odor:** Mild solvent odor

Section 4 - Fire And Explosion Hazard Data

Flash Point:	Flammable Limits:	LEL:	UEL:
100° F TCC		1.0%	7.0%

Extinguishing Media: Foam, Carbon Dioxide, Water Fog

Special Firefighting Procedures:
Do not use water as liquid

Unusual Fire And Explosion Hazards:
None

Continued on Next Page

Section 5 - Reactivity Data

Stability: Stable **Conditions To Avoid:** None

Incompatability (Materials To Avoid): None known

Hazardous Decomposition: Carbon monoxide and carbon dioxide

Hazardous Polymerization: None known

Section 6 - Health Hazard Data

Routes of Entry: **Inhalation** YES/Primary **Skin** YES/Primary **Ingestion** YES/Secondary

Health Hazards:

Inhalation of high vapor concentrations can cause dizziness and headaches. Prolonged skin contact can lead to dry and irritated skin possibly causing dermatitis.

Carcinogenicity: **NTP** NO **IARC** NO **OSHA Regulated** NO

Signs And Symptoms of Exposure:

Dizziness, nausea

Medical Conditions Generally Aggravated By Exposure:

N/A

Emergency And First Aid Procedures:

Remove to fresh air and call physician as soon as possible. If unconscious, give artificial respiration. If splashed in eyes, flush thoroughly with water.

Continued on Next Page

Section 7 - Precautions For Safe Handling And Use:

Steps To Be Taken In Case Material Is Released Or Spilled:

Remove all sources of ignition (Flames, hot surfaces and electrical, static or frictional sparks). Avoid breathing vapors. Ventilate area. Remove with inert absorbent and non-sparking tools.

Waste Disposal Method:

Dispose in accordance with local, state and federal regulations. Incinerate in approved facility. Do not incinerate in closed containers.

Precautions To Be Taken In Handling And Storing:

Do not store above 120° F. Store large quantities in buildings designed and protected for storage of NFPA combustible liquids.

Other Precautions:

None

Section 8 - Control Measures:

Respiratory Protection:

In confined spaces or other circumstances where adequate ventilation cannot be assured use NIOSH-approved respirator, positive pressure airline mask, or self contained breathing apparatus.

Ventilation:	**Local Exhaust**	Adequate	**Special**	N/A
	Mechanical	N/A	**Other:**	N/A

Gloves:	Regular working gloves.
Eye Protection:	Use safety eyewear.
Other Protective Clothing:	Clothing that prevents skin contact with material.
Work/Hygienic Practices	Prevent prolonged skin contact with contaminated clothing.

Additional Information:

HERCULES® MATERIAL SAFETY INFORMATION SERVICE

FACTS Faxed FAST!

For Hercules Material Safety Data Sheets by fax anytime, day or night, just call 1-800-942-INFO (1-800-942-4636) from any Touch-Tone phone. Have your fax number ready. Checking the product label for the correct MSDS # will save time.

Rosco Laboratories Inc.
52 Harbor View Avenue
Stamford, CT, USA, 06902
Phone: (203) 708 8900

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name : **CHROMA KEY**
Chroma Key Blue (No. 5710)
Chroma Key Green (No. 5711)

Product Use : Paint

Chemical Family : Mixture

Supplier's name and address:

Rosco Laboratories Inc.

52 Harbor View Avenue
Stamford, CT, United States
06902

24 Hr. Emergency Tel # : (800) 424-9300

HMIS Rating : * - Chronic hazard 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe

Health: * 1 *Flammability:* 0 *Reactivity:* 0

WHMIS Classes:

TOXIC

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS #	% (weight)	ACGIH TLV TWA	ACGIH TLV STEL	OSHA PEL PEL	OSHA PEL STEL
Chroma Key Blue						
No hazardous ingredients	**N-/A-v**	**N/Av**	**N/Av**	**N/Av**	**N/Av**	**N/Av**
Chroma Key Green						
Propylene glycol	**57-55-6**	**1.0 - 5.0**	**N/Av**	**N/Av**	**N/Av**	**N/Av**

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Blue liquid. (Chroma Key Blue); Green liquid. (Chroma Key Green). Slight odor. May cause skin and eye irritation. May cause skin sensitization.

POTENTIAL HEALTH EFFECTS

Target organs : None reported by the manufacturer.

Routes of exposure : *Inhalation:* YES *Skin Absorption:* YES *Skin & Eyes:* YES *Ingestion:* YES

Potential acute health effects :

Eyes: Causes eye irritation. May cause conjunctivitis, irritation, and inflammation of mucous membranes. May cause burning sensation, redness and tearing (watering).

Skin: Irritating to skin. Possible irritation, defatting or dermatitis (rash). Components of the product may be absorbed into the body through the skin. May cause central nervous system depression.

Inhalation: Can cause irritation of the respiratory tract. Prolonged exposure to vapors may be harmful to health. If higher concentrations are inhaled, additional symptoms may include coughing, shortness of breath, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects.

Ingestion: This product may be aspirated (inhaled) into the lungs during ingestion. May cause mucous membrane irritation. Ingestion may cause symptoms similar to inhalation. May cause gastrointestinal irritation. Gastrointestinal irritation may include abdominal pain, nausea, diarrhea and vomiting.

Potential chronic health effects
: Prolonged skin contact may defat the skin and produce dermatitis.

Medical conditions aggravated by overexposure
: None expected, when used as intended.

Additional health hazards : None reported by the manufacturer.

Potential environmental effects
: None reported by the manufacturer.

SECTION 4 - FIRST AID MEASURES

Inhalation : If breathed in, move person into fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Seek immediate medical attention/advice.

Skin contact : Flush with plenty of water. Wash off with soap and plenty of water. Remove and wash contaminated clothing before re-use. If irritation persists, seek prompt medical attention.

Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If irritation persists, seek prompt medical attention.

Ingestion : Call a physician or Poison Control Centre immediately. Do NOT induce vomiting. Guard against aspiration into lungs by having the individual turn on their left side.

Notes For Physician : Treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES

Fire hazards/conditions of flammability
: Not flammable under normal conditions of handling. This product will not burn, due to its water content.

Flammability classification (OSHA 29 CFR 1910.1200)
: Combustible Liquid Class III B.

Flash point : Not applicable.

Flash point Method : Not applicable.

Auto-ignition temperature : Not available.

Lower flammable limit (% by vol.)
: Not applicable.

Upper flammable limit (% by vol.)
: Not applicable.

Suitable extinguishing media
: Dry chemical, foam, carbon dioxide and water fog.

Explosion data: Sensitivity to mechanical impact / static discharge
: Not expected to be sensitive to mechanical impact or static discharge.

Special fire-fighting procedures/equipment
: Firefighters should wear an approved full-face, self-contained breathing apparatus (SCBA) and impervious clothing. Water may be ineffective on fire, but may be helpful in cooling unburned containers. Do not use a solid water stream as it may scatter and spread fire. If water is used, fog nozzles are preferable.

Hazardous combustion products
: Carbon dioxide and carbon monoxide.

Oxidizing properties : None reported by the manufacturer.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions : All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Avoid breathing vapors. Wear resistant clothing and boots.

Environmental precautions : Prevent product from entering drains, sewers, waterways and soil.

Spill response/cleanup : Eliminate all ignition sources if safe to do so. Ventilate area of release. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13).

Containment : Should not be released into the environment. Recover free liquid or cover with inert absorbent material and place into appropriate container for disposal.

SECTION 7 - HANDLING AND STORAGE

Safe Handling procedures : Use with adequate ventilation. Avoid breathing vapor or mist. Avoid contact with skin and eyes. Wash hands thoroughly after using this product, and before eating, drinking or smoking. Do not re-use empty containers. Do not puncture container. Keep in properly labeled containers. Wear suitable protective equipment. Do not ingest.

Storage requirements : Store in a cool, dry, well-ventilated area. Keep away from excessive heat, open flames, sparks and other possible sources of ignition. Do not freeze. Keep container tightly closed when not in use. Store in upright position only. Keep out of the reach of children. Empty product containers may contain hazardous product residue.

Incompatible materials : Peroxides and/or strong oxidizing agents.

Special packaging materials
: Liquid-proof glass, plastic or non-corrodible metal containers are recommended.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ventilation and engineering measures
: Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits. Use explosion-proof equipment. Use non-sparking equipment. Discharge exhaust only in area away from ignition sources.

Respiratory protection : Use NIOSH/MSHA approved full-face respirator with an organic vapor cartridge if the recommended exposure limit is exceeded. In order to avoid inhalation of spray-mist and sanding dust, all spraying and sanding must be done wearing adequate respirator. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4-02.

Skin protection : Wear impervious gloves, such as neoprene or nitrile rubber.

Eye / face protection : Safety glasses with side-shields or chemical splash goggles.

Other protective equipment
: Emergency showers and eyewash facilities should be nearby. Depending on conditions of use, safety shoes and additional protective clothing may also be necessary.

General hygiene considerations
: Wash hands thoroughly after using this product, and before eating, drinking or smoking. Wash hands before breaks and at the end of workday.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state : Liquid.

Appearance : Blue liquid. (Chroma Key Blue)
Green liquid. (Chroma Key Green)

Odor : Slight odor.

Odor threshold : Not available.

pH : Not available.

Boiling point : 100 °C (Chroma Key Blue)
187.2 °C (Chroma Key Green)

Specific gravity : 1.4 (Chroma Key Blue)
1.3 (Chroma Key Green)

Melting/Freezing point : Not available.

Coefficient of water/oil distribution
: Not available.

Vapor pressure (mmHg @ 20° C / 68° F)
: 1.0 - 760 (Chroma Key Blue)
0.06 -760 (Chroma Key Green)

Solubility in water : Soluble.

Vapor density (Air = 1) : Heavier than air.

Evaporation rate (n-Butyl acetate = 1)

: Slower than n-butyl acetate

Volatile organic Compounds (VOC's) (lbs/gal;g/l) : Chroma Key Blue: 1.03/123.60 Chroma Key Green: 1.04/125.56

Volatiles (% by weight) : 42.7 (Chroma Key Blue) 46.5 (Chroma Key Green)

Viscosity : Not available.

Special Remarks On Fire Hazards
: Not flammable under normal conditions of use. This product will not burn, due to its water content. May spatter if the temperature exceeds the boiling point. Vapors may irritate eyes. May irritate skin.

SECTION 10 - REACTIVITY AND STABILITY DATA

Stability and reactivity : Stable under normal conditions.
Hazardous polymerization : Will not occur.
Conditions to avoid : High temperatures. Oxidizing agents. Do not freeze.
Materials To Avoid And Incompatibility
: See Section 7 (Handling and Storage) section for further details.
Hazardous decomposition products
: See hazardous combustion products.

SECTION 11 - TOXICOLOGICAL INFORMATION

Ingredients	LC_{50}(4hr) inh, rat	LD_{50} oral	LD_{50} dermal
Chroma Key Blue			
No hazardous ingredients	N/Av	N/Av	N/Av
Chroma Key Green			
Propylene glycol	N/Av	20,000 mg/kg (rat)	20,800 mg/kg (rabbit)

Toxicological data : Low order of toxicity for normal industrial handling.
Carcinogenic status : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.
Reproductive effects : Not expected to have other reproductive effects.
Teratogenicity : Not expected to be a teratogen.
Mutagenicity : Not expected to be mutagenic in humans.
Reproductive Effects : Not expected to have other reproductive effects.
Irritancy : Eyes, skin, respiratory system and digestive system.
Sensitization to material : Chroma Key Green: Prolonged or repeated contact may result in skin sensitization. Contains: Propylene glycol.
Synergistic materials : None reported by the manufacturer.

SECTION 12 - ECOLOGICAL INFORMATION

Environmental effects : None known or reported by the manufacturer.
Important environmental characteristics
: None known or reported by the manufacturer.
Ecotoxicological : No data is available on the product itself.

SECTION 13 - DISPOSAL CONSIDERATIONS

Handling for Disposal : See Section 7 (Handling and Storage) section for further details.
Methods of Disposal : Dispose in accordance with all applicable federal, state, provincial and local regulations. Contact your local, state, provincial or federal environmental agency for specific rules. Do not puncture or incinerate. Contact waste disposal services.

Rosco Laboratories Inc.
52 Harbor View Avenue
Stamford, CT, USA, 06902
Phone: (203) 708 8900

SECTION 14 - TRANSPORTATION INFORMATION

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
TDG	None	Not regulated.	Not regulated	-None-	
TDG Additional information	None.				
49CFR/DOT	None	Not regulated.	Not regulated	-None-	
49CFR/DOT Additional information	None.				
ICAO/IATA	None	Not regulated.	Not regulated	-None-	
ICAO/IATA Additional information	None.				
IMDG	None	Not regulated.	Not regulated	-None-	
IMDG Additional information	None.				

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

All ingredients are listed on the TSCA Inventory, or are exempted materials.
SARA Section 313: This material is not subject to SARA notification requirements, since it does not contain any Toxic Chemical Constituents above de minimus concentrations.

US State Right to Know Laws:

California Proposition 65: To the best of our knowledge, this product does not contain any chemicals known to the State of California to cause cancer or reproductive harm.

Canadian Regulations:

Canadian Environmental Protection Act (CEPA): All ingredients are listed on the DSL, or are exempted materials.
Canadian WHMIS Classification: D2B.
This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

SECTION 16 - OTHER INFORMATION

Legend : ACGIH: American Conference of Governmental Industrial Hygienists
IARC: International Agency for Research on Cancer
N/Ap: not applicable
N/Av: not available
NIOSH: National Institute of Occupational Safety and Health
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration

References : Information obtained from sources including original supplier's Material Safety Data Sheet, and references including RTECS and CCOHS Cheminfo.

Prepared for: Rosco Laboratories Inc. 52 Harbor View Avenue Stamford, CT, USA, 06902 Phone: (203) 708 8900 http://http://www.rosco.com/	
Prepared by: ICC The Compliance Center Inc. **Canada: 1-888-977-4834** **USA: 1-888-442-9628** http://www.thecompliancecenter.com	

DISCLAIMER OF LIABILITY

Every effort has been made to ensure that the safety information on this sheet is accurate, but because Rosco Laboratories, Inc. has no control over the conditions under which the product will be used, liability is limited exclusively to replacement or refund of the purchase price of this product. Except as stated herein, there are no express or implied warranties, including implied warranties of merchantability or fitness for a particular purpose. Rosco Laboratories, Inc. assumes no liability for injury or incidental or consequential damages arising out of storage, handling or use of this product.

Preparation Date: January 3, 2007

END OF DOCUMENT

OHIO STATE UNIVERSITY COLLEGE OF BIOLOGICAL SCIENCES MSDS FILE

ROSS CHEMICAL COMPANY -- ROSS RUBBER CEMENT
MATERIAL SAFETY DATA SHEET
FSC: 8040
NIIN: 00N008082
Manufacturer's CAGE: 86816
Part No. Indicator: A
Part Number/Trade Name: ROSS RUBBER CEMENT

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General Information

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Company's Name: ROSS CHEMICAL COMPANY (CONROS CORPORATION)
Company's Emerg Ph #: 313-842-7370
Record No. For Safety Entry: 001
Tot Safety Entries This Stk#: 001
Date MSDS Prepared: 01JAN87
Safety Data Review Date: 11AUG86
MSDS Serial Number: BCPJP
NRC/State License Number: N/A
Net Explosive Weight: N/A
Net Propellant Weight-Ammo: N/A
Coast Guard Ammunition Code: N/A

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Ingredients/Identity Information

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Proprietary: NO
Ingredient: HEXANE (N-HEXANE)
Ingredient Sequence Number: 01
NIOSH (RTECS) Number: MN9275000
CAS Number: 110-54-3
OSHA PEL: 500 PPM
ACGIH TLV: 50 PPM; 9293

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Physical/Chemical Characteristics

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Appearance And Odor: PALE YELLOW,TRANSLUCENT LIQ,HYDROCARBON-LIKE ODOR.
Boiling Point: 154.4F,68C
Specific Gravity: 0.686
Solubility In Water: IMMISCIBLE
Percent Volatiles By Volume: 85
Viscosity: N/A
Radioactivity: N/A
Autoignition Temperature: N/A

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Fire and Explosion Hazard Data

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Flash Point: -7F (-21.7C),TCC
Extinguishing Media: CO*2,FOAM,DRY CHEMICAL
Special Fire Fighting Proc: COOL FIRE-EXP CNTNR W/H*2O.WEAR FULL PROT EQUIP,SCBA.
Unusual Fire And Expl Hazrds: H*2O MAY SPREAD FIRE (SOLVENT FLOATS ON H*2O).HEATING MAY CAUSE PRESS BUILD-UP,POSS RUPTURE OF CNTNR

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Reactivity Data

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Stability: YES
Materials To Avoid: NONE KNOWN
Hazardous Poly Occur: NO

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Health Hazard Data

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Signs/Symptoms Of Overexp: EYES:LIQ/VAP IRRITATES. SKIN:LIQ/VAP IRRITATES. INHAL:VAPOR HARMFUL. INGEST:HARMFUL IF SWALLOWED.
Emergency/First Aid Proc: EYES:FLUSH IMMED W/PLENTY OF H*2O FOR @ LEAST 15 MIN. SKIN:WASH W/SOAP + H*2O.WASH CONTAM CLOTHING BEFORE REUSE. INHAL:RMV
TO FRESH AIR.IF DIFFICULT BRTHG,GIVE O*2.CALL DR. INGEST:DO NOT INDUCE VOMIT.IMMED DRINK LGE QUANT OF MILK/H*2O.CALL PHYSICIAN.

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Precautions for Safe Handling and Use

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Steps If Matl Released/Spill: REMOVE ALL IGNITION SOURCES.DIKE TO CONTAIN SPILL.WEAR RECOMND PROT EQUIP,RESP PROT.USE EXPLOSION-PROOF EQUIP TO RMV BULK OF LIQ.ADD DRY MATL TO ABSORB REMAINING LIQ,PICK UP,CONTAINERIZE FOR RECOVERY/DISPOSAL.RINSE AREA W/H*2O,COLLECT FOR DISPOSAL.
Waste Disposal Method: DISPOSE OF IN A LICENSED HAZARDOUS WASTE DISPOSAL FACILITY IAW FEDERAL,STATE + LOCAL REGULATIONS. THIS PRODUCE,IF DISPOSED AS

SHIPPED,MEETS EPA CRITERIA OF A HAZARDOUS WASTE AS SPECIFIED IN 40 CFR 261 ON THE BASIS OF ITS IGNITABILITY.
Precautions-Handling/Storing: DO NOT STORE/HANDLE IN THE PRESENCE OF HEAT, SPARKS/OPEN FLAME.GROUND/BOND CONTAINERS WHEN TRANSFERRING.AVOID EYE,SKIN/
CLOTHING CONTACT.
Other Precautions: WEAR PROTECTIVE EQUIPMENT.WASH THOROUGHLY AFTER HANDLING.USE VENTILATION.

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Control Measures

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Respiratory Protection: NIOSH/MSHA APPROVED RESP PROT DEPENDING ON CONDITION OF USE.
Ventilation: LOCAL EXHAUST VENTILATION.
Protective Gloves: RUBBER/VINYL
Eye Protection: SFTY GLASSES W/SIDE SHLDS
Other Protective Equipment: WORK CLOTHING,CHEMICAL GOGGLES
Suppl. Safety & Health Data: DATE OF PREP: JUNE, 1986.

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Transportation Data

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Trans Data Review Date: 86295
DOT PSN Code: AFR
DOT Proper Shipping Name: ADHESIVES,
DOT Class: 3
DOT ID Number: UN1133
DOT Pack Group: II
DOT Label: FLAMMABLE LIQUID
DOT/DoD Exemption Number: N/A
IMO PSN Code: DUW
IMO Proper Shipping Name: CEMENT, LIQUID *
IMO Regulations Page Number: SEE 3102
IMO UN Number: 1133
IMO UN Class: 3.1 *
IMO Subsidiary Risk Label: -
IATA PSN Code: AKY
IATA UN ID Number: 1133
IATA Proper Shipping Name: ADHESIVES
IATA UN Class: 3
IATA Label: FLAMMABLE LIQUID
AFI PSN Code: AKY
AFI Prop. Shipping Name: ADHESIVES
AFI Class: 3
AFI ID Number: UN1133
AFI Pack Group: II
AFI Label: FLAMMABLE LIQUID
AFI Basic Pac Ref: 7-8

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Disposal Data

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Label Data

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Label Required: YES
Label Status: G
Common Name: ROSS RUBBER CEMENT
Special Hazard Precautions: EYES:LIQ/VAP IRRITATES. SKIN: LIQ/VAP IRRITATES. INHAL:VAPOR HARMFUL. INGEST:HARMFUL IF SWALLOWED.
Label Name: ROSS CHEMICAL COMPANY (CONROS CORPORATION)
Label Emergency Number: 313-842-7370

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URL for this msds http://hazard.com. If you wish to change, add to, or delete information in this archive please sent updates to dan@hazard.com.

Monsanto Company, Lawn & Garden Products

Safety Data Sheet
Commercial Product

1. PRODUCT AND COMPANY IDENTIFICATION

1.1. Product identifier

Roundup® Ready-To-Use Extended Control Weed & Grass Killer Plus Weed Preventer II

1.1.1. Chemical name
Not applicable.
1.1.2. Synonyms
None
1.1.3. EPA Reg. No.
71995-47

1.2. Product use
Herbicide

1.3. Company
Monsanto Company, Lawn & Garden Products, P.0. Box 418, Marysville, OH, 43041
Telephone: 1-800-246-7219
E-mail: safety.datasheet@monsanto.com

1.4. Emergency numbers
FOR CHEMICAL EMERGENCY, SPILL LEAK, FIRE, EXPOSURE, OR ACCIDENT Call CHEMTREC - Day or Night: 1-800-424-9300 toll free in the continental U.S., Puerto Rico, Canada, or Virgin Islands. For calls originating elsewhere: 703-527-3887 (collect calls accepted).
FOR MEDICAL EMERGENCY - Day or Night: 1-800-246-7219

2. HAZARDS IDENTIFICATION

2.1. Classification
OSHA Hazard Communication Standard, 29 CFR 1910.1200 (2012)
Not classified as hazardous.

2.2. Appearance and odour (colour/form/odour)
Hazy-Clear /Liquid / Slight

2.3. OSHA Status
This product is not hazardous according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Refer to section 11 for toxicological and section 12 for environmental information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Active ingredient

Nonanoic and related fatty acids; {Pelargonic and related fatty acids}
Isopropylamine salt of N-(phosphonomethyl)glycine; {Isopropylamine salt of glyphosate}
Ammonium salt of 2-[4,5-dihydro-4-methyl-4-(1-methyl)-5-oxo-1H-imidazol-2-yl]-5-methyl-3-pyridinecarboxylic acid; {Ammonium salt of imazapic}

Composition

COMPONENT	CAS No.	% by weight (approximate)
Pelargonic and related fatty acids	112-05-0	2
Isopropylamine salt of glyphosate	38641-94-0	1
Ammonium salt of imazapic	104098-49-9	0.017
Other ingredients		96.983

The specific chemical identity is being withheld because it is trade secret information of Monsanto Company.

4. FIRST AID MEASURES

Use personal protection recommended in section 8.

4.1. Description of first aid measures

4.1.1. Eye contact: If in eyes, hold eye open and rinse slowly and gently for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice.

4.1.2. Skin contact: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

4.1.3. Inhalation: If inhaled, move person to fresh air. If person is not breathing, call emergency number or ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.

4.1.4. Ingestion: Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison center or doctor. Do not give anything by mouth to an unconscious person.

4.2. Most important symptoms and effects, both acute and delayed

4.2.1. Eye contact, short term: Not expected to produce significant adverse effects when recommended use instructions are followed.

4.2.2. Skin contact, short term: Not expected to produce significant adverse effects when recommended use instructions are followed.

4.2.3. Inhalation, short term: Not expected to produce significant adverse effects when recommended use instructions are followed.

4.2.4. Single ingestion: Not expected to produce significant adverse effects when recommended use instructions are followed.

4.3. Indication of any immediate medical attention and special treatment needed

4.3.1. Advice to doctors: This product is not an inhibitor of cholinesterase.

4.3.2. Antidote: Treatment with atropine and oximes is not indicated.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

5.1.1. Recommended: Water, foam, dry chemical, carbon dioxide (CO2)

5.2. Special hazards

5.2.1. Unusual fire and explosion hazards

None.
Minimise use of water to prevent environmental contamination.
Environmental precautions: see section 6.

5.2.2. Hazardous products of combustion
Carbon monoxide (CO), phosphorus oxides (PxOy), nitrogen oxides (NOx)

5.3. Fire fighting equipment: Self-contained breathing apparatus. Equipment should be thoroughly decontaminated after use.

5.4. Flash point
Does not flash.

6. ACCIDENTAL RELEASE MEASURES

6.1. Environmental precautions
SMALL QUANTITIES:
Low environmental hazard.
LARGE QUANTITIES:
Minimise spread.
Keep out of drains, sewers, ditches and water ways.

6.2. Methods for cleaning up
SMALL QUANTITIES:
Flush spill area with water.
Wash spill area with detergent and water.
LARGE QUANTITIES:
Absorb in earth, sand or absorbent material.
Absorb only in non-combustible material.
Dig up heavily contaminated soil.
Collect in containers for disposal.
Refer to section 7 for types of containers.
Flush residues with small quantities of water.
Minimise use of water to prevent environmental contamination.

Refer to section 13 for disposal of spilled material.
Use handling recommendations in Section 7 and personal protection recommendations in Section 8.

7. HANDLING AND STORAGE

Good industrial practice in housekeeping and personal hygiene should be followed.

7.1. Precautions for safe handling
Avoid contact with eyes. Avoid breathing vapour or mist. When using do not eat, drink or smoke. Wash hands thoroughly after handling or contact. Wash contaminated clothing before re-use. Thoroughly clean equipment after use. Do not contaminate drains, sewers and water ways when disposing of equipment rinse water. Refer to section 13 of the safety data sheet for disposal of rinse water.

7.2. Conditions for safe storage
Minimum storage temperature: 5 °C
Maximum storage temperature: 50 °C
Compatible materials for storage: stainless steel, glass lining, fibreglass, aluminium, plastic
Incompatible materials for storage: galvanised steel, unlined mild steel, see section 10.
Keep out of reach of children.
Keep away from food, drink and animal feed.
Keep only in the original container.

Keep container tightly closed in a cool, well-ventilated place.
Partial crystallization may occur on prolonged storage below the minimum storage temperature.
If frozen, place in warm room and shake frequently to put back into solution.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Airborne exposure limits

Components	Exposure Guidelines
Pelargonic and related fatty acids	No specific occupational exposure limit has been established.
Isopropylamine salt of glyphosate	No specific occupational exposure limit has been established.
Ammonium salt of imazapic	No specific occupational exposure limit has been established.
Other ingredients	No specific occupational exposure limit has been established.

8.2. Engineering controls: No special requirement when used as recommended. If airborne exposure is excessive: Provide adequate ventilation to keep airborne concentration below exposure limits.

8.3. Recommendations for personal protective equipment

8.3.1. Eye protection: If there is significant potential for contact: Wear chemical goggles.
8.3.2. Skin protection: No special requirement when used as recommended.
8.3.3. Respiratory protection: No special requirement when used as recommended.

When recommended, consult manufacturer of personal protective equipment for the appropriate type of equipment for a given application.

9. PHYSICAL AND CHEMICAL PROPERTIES

These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

Colour/colour range:	Hazy - Clear
Odour:	Slight
Form:	Liquid
Physical form changes (melting, boiling, etc.):	
Melting point:	Not applicable.
Boiling point:	No data.
Flash point:	Does not flash.
Explosive properties:	No explosive properties
Auto ignition temperature:	No data.
Self-accelerating decomposition temperature (SADT):	No data.
Oxidizing properties:	No data.
Specific gravity:	1.02 @ 20 °C
Vapour pressure:	No significant volatility; aqueous solution.
Vapour density:	Not applicable.
Evaporation rate:	No data.
Dynamic viscosity:	No data.
Kinematic viscosity:	No data.
Density:	1.02 g/cm3 @ 20 °C

Solubility:	Water: Completely miscible.
pH:	7.2 - 7.5
Partition coefficient:	log Pow: 3.42 (pelargonic acid)
Partition coefficient:	log Pow: -3.2 @ 25 °C (glyphosate)
Partition coefficient:	log Pow: 0.393 @ 25 °C (imazapic)

10. STABILITY AND REACTIVITY

10.1. Reactivity
Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode.

10.2. Stability
Stable under normal conditions of handling and storage.

10.3. Possibility of hazardous reactions
Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode.

10.4. Incompatible materials
galvanised steel;unlined mild steel;see section 10.;
Compatible materials for storage: see section 7.2.

10.5. Hazardous decomposition
Thermal decomposition: Hazardous products of combustion: see section 5.

11. TOXICOLOGICAL INFORMATION

This section is intended for use by toxicologists and other health professionals.

Likely routes of exposure: Skin contact, eye contact, inhalation

Potential health effects
Eye contact, short term: Not expected to produce significant adverse effects when recommended use instructions are followed.
Skin contact, short term: Not expected to produce significant adverse effects when recommended use instructions are followed.
Inhalation, short term: Not expected to produce significant adverse effects when recommended use instructions are followed.
Single ingestion: Not expected to produce significant adverse effects when recommended use instructions are followed.

Data obtained on similar products and on components are summarized below.

Similar formulation

Acute oral toxicity
Rat, LD50: > 5,000 mg/kg body weight
Practically non-toxic.

Acute dermal toxicity

Rat, LD50: > 5,000 mg/kg body weight
Practically non-toxic. No mortality.

Skin irritation

Rabbit, 3 animals, OECD 404 test:
Days to heal: 1
Primary Irritation Index (PII): 0.3/8.0
Essentially non irritating.

Eye irritation

Rabbit, 3 animals, OECD 405 test:
Days to heal: 2
Essentially non irritating.

Acute inhalation toxicity

Rat, LC50 (limit test), 4 hours, aerosol:
Practically non-toxic. No mortality. No 4-hr LC50 at the maximum tested concentration. Not hazardous for transportation.

Skin sensitization

Guinea pig, 3-induction Buehler test:
Positive incidence: 0 %
Negative.

Pelargonic and related fatty acids

Genotoxicity

Not genotoxic on the basis of weight of evidence analysis.

Carcinogenicity

Not carcinogenic to laboratory animals after dermal administration.

Reproductive/Developmental Toxicity

Not developmentally toxic to laboratory animals.

N-(phosphonomethyl)glycine; { glyphosate acid}

Genotoxicity

Not genotoxic.

Carcinogenicity

Not carcinogenic in rats or mice.

Reproductive/Developmental Toxicity

Reproductive effects in rats only in the presence of significant maternal toxicity.
Developmental effects in rats and rabbits only in the presence of significant maternal toxicity.

Imazapic acid

Genotoxicity

Not genotoxic.

Carcinogenicity

Not carcinogenic in rats or mice.

Reproductive/Developmental Toxicity

No reproductive effects in rats.
No developmental effects in rats or rabbits.

12. ECOLOGICAL INFORMATION

This section is intended for use by ecotoxicologists and other environmental specialists.

Data obtained on a similar glyphosate formulation and/or glyphosate are summarized below. The minor active ingredients are not predicted to significantly contribute to the ecological toxicity of this formulation.

Similar formulation

Aquatic toxicity, fish

Rainbow trout (Oncorhynchus mykiss):
Acute toxicity, 96 hours, static, LC50: 98 mg/L
Slightly toxic.

Aquatic toxicity, invertebrates

Water flea (Daphnia magna):
Acute toxicity, 48 hours, static, EC50: 115 mg/L
Practically non-toxic.

Aquatic toxicity, algae/aquatic plants

Green algae (Pseudokirchneriella subcapitata):
Acute toxicity, 72 hours, static, EC50: 51 mg/L
Slightly toxic.

Duckweed (Lemna gibba):
Acute toxicity, 7 days, static, EC50 (frond number): 152 mg/L
Practically non-toxic.

Duckweed (Lemna gibba):
Acute toxicity, 7 days, static, NOEC: 20 mg/L

Arthropod toxicity

Honey bee (Apis mellifera):
Oral, 48 hours, LD50: > 7,841 µg/bee

Honey bee (Apis mellifera):
Contact, 48 hours, LD50: > 1,078 µg/bee

Soil organism toxicity, invertebrates

Earthworm (Eisenia foetida):
Acute toxicity, 14 days, LC50: > 10,000 mg/kg dry soil
Practically non-toxic.

Soil organism toxicity, microorganisms

Nitrogen and carbon transformation test:
388 L/ha, 28 days: Less than 25% effect on nitrogen or carbon transformation processes in soil.

N-(phosphonomethyl)glycine; { glyphosate acid}

Avian toxicity

Bobwhite quail (Colinus virginianus):
Dietary toxicity, 5 days, LC50: > 4,640 mg/kg diet

No more than slightly toxic.

Mallard duck (Anas platyrhynchos):

Dietary toxicity, 5 days, LC50: > 4,640 mg/kg diet

No more than slightly toxic.

Bobwhite quail (Colinus virginianus):

Acute oral toxicity, single dose, LD50: > 3,851 mg/kg body weight

Practically non-toxic.

Bioaccumulation

Bluegill sunfish (Lepomis macrochirus):

Whole fish: BCF: < 1

No significant bioaccumulation is expected.

Dissipation

Soil, field:

Half life: 2 - 174 days

Koc: 884 - 60,000 L/kg

Adsorbs strongly to soil.

Water, aerobic:

Half life: < 7 days

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

13.1.1. Product

Keep out of drains, sewers, ditches and water ways. Recycle if appropriate facilities/equipment available. Burn in proper incinerator. Follow all local/regional/national/international regulations.

13.1.2. Container

See the individual container label for disposal information. Emptied containers retain vapour and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed. Empty packaging completely. Triple or pressure rinse empty containers. Do NOT contaminate water when disposing of rinse waters. Ensure packaging cannot be reused. Do NOT re-use containers. Store for collection by approved waste disposal service. Recycle if appropriate facilities/equipment available. Follow all local/regional/national/international regulations.

Use handling recommendations in Section 7 and personal protection recommendations in Section 8.

14. TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

14.1. US Dept. of Transportation (DOT) Hazardous Materials Regulations (49 CFR Parts 105-180)

Proper Shipping Name (Technical Name if required):	Not regulated for domestic ground transportation. ()

14.2. IMDG Code

Proper Shipping Name (Technical Name if required):	Not regulated for transport under IMO Regulations ()

14.3. IATA/ICAO

Proper Shipping Name (Technical Name if required):	Not regulated for transport under IATA/ICAO Regulations ()

15. REGULATORY INFORMATION

15.1. Environmental Protection Agency

15.1.1. TSCA Inventory

Exempt

15.1.2. SARA Title III Rules

Section 311/312 Hazard Categories: Immediate
Section 302 Extremely Hazardous Substances: Not applicable.
Section 313 Toxic Chemical(s): Not applicable.

15.1.3. CERCLA Reportable quantity

Not applicable.

15.1.4. Federal Insecticide, Fungicide, Rodenticide Act (FIFRA)

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

CAUTION!

Acute oral toxicity: FIFRA category IV.
Acute dermal toxicity: FIFRA category IV.
Acute inhalation toxicity: FIFRA category IV.
Skin irritation: FIFRA category IV.
Eye irritation: FIFRA category IV.

16. OTHER INFORMATION

The information given here is not necessarily exhaustive but is representative of relevant, reliable data.
Follow all local/regional/national/international regulations.
Please consult supplier if further information is needed.
In this document the British spelling was applied.
|| Significant changes versus previous edition.

	Health	Flammability	Instability	Additional Markings
NFPA	0	1	1	

0 = Minimal hazard, 1 = Slight hazard, 2 = Moderate hazard, 3 = Severe hazard, 4 = Extreme hazard

Full denomination of most frequently used acronyms. BCF (Bioconcentration Factor), BOD (Biochemical Oxygen Demand), COD (Chemical Oxygen Demand), EC50 (50% effect concentration), ED50 (50% effect dose), I.M. (intramuscular), I.P. (intraperitoneal), I.V. (intravenous), Koc (Soil adsorption coefficient), LC50 (50% lethality concentration), LD50 (50% lethality dose), LDLo (Lower limit of lethal dosage), LEL (Lower Explosion Limit), LOAEC (Lowest Observed Adverse Effect Concentration), LOAEL (Lowest Observed Adverse Effect Level), LOEC (Lowest Observed Effect Concentration), LOEL (Lowest Observed Effect Level), MEL (Maximum Exposure limit), MTD (Maximum Tolerated Dose), NOAEC (No Observed Adverse Effect Concentration), NOAEL (No Observed Adverse Effect Level), NOEC (No Observed Effect Concentration), NOEL (No Observed Effect Level), OEL (Occupational Exposure Limit), PEL (Permissible Exposure Limit), PII (Primary

Irritation Index), Pow (Partition coefficient n-octanol/water), S.C. (subcutaneous), STEL (Short-Term Exposure Limit), TLV-C (Threshold Limit Value-Ceiling), TLV-TWA (Threshold Limit Value - Time Weighted Average), UEL (Upper Explosion Limit)

This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABELING (attached to and accompanying the product container). This MSDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-approved label.

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, MONSANTO Company or any of its subsidiaries makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for the purposes prior to use. In no event will MONSANTO Company or any of its subsidiaries be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR TO THE PRODUCT TO WHICH INFORMATION REFERS.

Royal Rock

Material Safety Data Sheet **MSDS No. 402, 402A, 402B**

Section 2 - Composition / Information on Ingredients

Ingredient Name	CAS Number	% w t/vol
Calcium Sulfate	7778-18-9	99 %

Trace Impurities:

	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH
Ingredient	**TWA**	**STEL**	**TWA**	**STEL**	**TWA**	**STEL**	**IDLH**
Calcium Sulfate	5 mg/m^3		10 mg/m^3		N/A		N/A

Section 3 - Hazards Identification

May cause irritation to the eyes, skin, respiratory tract. Ingestion may result in an obstruction.
Signs and Symptoms of Exposure: Irritation of eyes, skin, nasal passages. Coughing and sneezing.
Medical Conditions Aggravated by Exposure: None identified.

HMIS	
H	**0**
F	**0**
R	**0**

Section 4 - First Aid Measures

Inhalation: Remove to fresh air.
Eye Contact: Flush with water for 15 minutes to remove particles.
Skin Contact: Wash with soap and water.
Ingestion: None known.

Section 5 - Fire-Fighting Measures

Extinguishing Media: None. Material is not combustible.
Fire-Fighting Instructions: None. Material is not combustible.
Unusual Fire or Explosion Hazards: None.

Section 6 - Accidental Release Measures

Sweep or vacuum material from spillage into a waste container. Avoid creating dusty conditions.
Disposal: Follow all Federal, State, and Local regulations for disposal.

Section 7 - Handling and Storage

Handling Precautions: Moisture or the presence of liquid water wil hardne the material.
Storage Requirements: Store in a cool, dry place with the container sealed.
Regulatory Requirements: Follow all Federal, State, and Local regulations.

Section 8 - Exposure Controls / Personal Protection

Respirator Protection: When dusty conditions exist, wear an approved dust mask to guard against nuisance particles.
Ventilation: Provide general ventilation and local exhuast to meet TLV requirements.
Protective Gloves: Not necessary.
Eye Protection: Goggles.
Other Protective Equipment: None.
Work and Hygienic Practices: Handle in accordance with good personal hygiene and safety practices and avoid unnecessary exposure.

Section 9 - Physical and Chemical Properties

Physical State:	Powder.	**Water Solubility:**	Slight.
Appearance:	Blue Powder.	**Melting Point:**	N/A
Odor:	Odorless.	**Boiling Point:**	N/A

Section 10 - Stability and Reactivity

Stability: Yes.
Polymerization: No.
Imcompatibilities: Acids.
Hazardous Combustion or Decomposition Products: Above 1450°C, sulfur oxide and calcium oxide.

Section 11 - Toxicological Information

Carcinogenicity: NPT: No OSHA: No IARC: No
Acute Inhalation LC50: No data.
Acute Dermal LD50: N/A
Acute Oral LD50: No data.

Section 12 - Ecological Information

Not likely to produce adverse ecological effects.

Section 13 - Disposal Considerations

Disposal: Consult your local and regional authorities.
Disposal Regulatory Requirements: Observe all Federal, State, and Local environmental regulations.

Section 14 - Transport Information

DOT Transportation Data: (49 CFR 172.101): Not regulated.

Section 15 - Regulatory Information

Federal and State Regulations:

Section 16 - Other Information

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. DfS Doje's Incorporated shall not be held liable for any damage resulting from handling or from contact with the above product.

Safety Data Sheet

RUST-OLEUM CORPORATION
* Trusted Quality Since 1921 *
www.rustoleum.com

1. Identification

Product Name:	ICWB LSPR 12PK FLUORESCENT PINK MARKING	**Revision Date:**	8/27/2014
Product Identifier:	1861838	**Supercedes Date:**	New SDS
Product Use/Class:	Marking Paint/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	**Manufacturer:**	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		
Emergency Telephone:	24 Hour Hotline: 847-367-7700		

2. Hazard Identification

EMERGENCY OVERVIEW: Harmful if swallowed. Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. May cause eye, skin, or respiratory tract irritation. KEEP OUT OF REACH OF CHILDREN. Harmful if inhaled. Causes eye irritation. Use ventilation necessary to keep exposures below recommended exposure limits, if any. Vapor Harmful. Causes Eye, Skin, Nose, and Throat Irritation.

Classification

Symbol(s) of Product

Signal Word
Danger

GHS HAZARD STATEMENTS

Flammable Aerosol, category 1	H222	Extremely flammable aerosol.
Flammable Liquid, category 1	H224	Extremely flammable liquid and vapour.
Acute Toxicity, Oral, category 5	H303	May be harmful if swallowed.
Acute Toxicity, Dermal, category 5	H313	May be harmful in contact with skin.
Skin Irritation, category 2	H315	Causes skin irritation.
Eye Irritation, category 2	H319	Causes serious eye irritation.
Acute Toxicity, Inhalation, category 4	H332	Harmful if inhaled.
STOT, single exposure, category 3, RTI	H335	May cause respiratory irritation.
STOT, single exposure, category 3, NE	H336	May cause drowsiness or dizziness.
Aspiration Hazard, category 2	H305	May be harmful if swallowed and enters airways.
Eye Irritation, category 2B	H320	Causes eye irritation.
Flammable Aerosol, category 1	H280	Contains gas under pressure; may explode if heated

GHS PRECAUTIONARY STATEMENTS

P211	Do not spray on an open flame or other ignition source.
P220	Keep/Store away from clothing/…/combustible materials.

P235	Keep cool.
P251	Pressurized container: Do not pierce or burn, even after use.
P375	Fight fire remotely due to the risk of explosion.
P102	Keep out of reach of children.
P103	Read label before use.
P202	Do not handle until all safety precautions have been read and understood.
P234	Keep only in original container.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P262	Do not get in eyes, on skin, or on clothing.
P264	Wash … thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use personal protective equipment as required.
P285	In case of inadequate ventilation wear respiratory protection.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P351	Rinse cautiously with water for several minutes.
P374	Fight fire with normal precautions from a reasonable distance.
P402	Store in a dry place.
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P410+P412	Protect from sunlight. Do no expose to temperatures exceeding 50°C/ 122°F.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/…/ equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P370+P378	In case of fire: Use … for extinction.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container to …
P321	Specific treatment (see … on this label).
P352	Wash with plenty of soap and water.
P362	Take off contaminated clothing and wash before reuse.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P302+P350	IF ON SKIN: Gently wash with plenty of soap and water.

3. Composition/Information On Ingredients

HAZARDOUS SUBSTANCES

Chemical Name	CAS-No.	Wt.% Range	GHS Symbols	GHS Statements
Liquefied Petroleum Gas	68476-86-8	25-50		
Limestone	1317-65-3	2.5-10		
Aliphatic Hydrocarbon	64742-89-8	2.5-10		
Xylene	1330-20-7	2.5-10	GHS02	H226
Barium Sulfate	7727-43-7	2.5-10		
Hydrotreated Light Distillate	64742-47-8	2.5-10	GHS06	H331
Mineral Spirits	64742-88-7	1.0-2.5	GHS06	H331
Ethylbenzene	100-41-4	1.0-2.5	GHS02-GHS07	H225-332

The text for GHS Hazard Statements shown above (if any) is given in the "16. Other Information" section.

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention. If swallowed, get medical attention.

5. Fire-fighting Measures

EXTINGUISHING MEDIA: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR!Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. Closed containers may explode when exposed to extreme heat due to buildup of steam. No unusual fire or explosion hazards noted.

SPECIAL FIREFIGHTING PROCEDURES: Evacuate area and fight fire from a safe distance. Full protective equipment including self-contained breathing apparatus should be used. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Use only in a well-ventilated area. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Remove contaminated clothing and launder before reuse. Use only with adequate ventilation. Avoid contact with eyes, skin and clothing.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials. Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep away from heat, sparks, flame and sources of ignition. Avoid excess heat.

8. Exposure Controls/Personal Protection

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Liquefied Petroleum Gas	68476-86-8	30.0	N.E.	N.E.	N.E.	N.E.
Limestone	1317-65-3	10.0	N.E.	N.E.	15 mg/m3 [Total Dust]	N.E.
Aliphatic Hydrocarbon	64742-89-8	10.0	100 ppm	N.E.	100 ppm	N.E.
Xylene	1330-20-7	5.0	100 ppm	150 ppm	100 ppm	N.E.
Barium Sulfate	7727-43-7	5.0	10 mg/m3	N.E.	15 mg/m3 [Total Dust]	N.E.
Hydrotreated Light Distillate	64742-47-8	5.0	200 mg/m3	N.E.	N.E.	N.E.
Mineral Spirits	64742-88-7	5.0	100 ppm	N.E.	100 ppm	N.E.
Ethylbenzene	100-41-4	5.0	20 ppm	125 ppm	100 ppm	N.E.

PERSONAL PROTECTION

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection. Use gloves to prevent prolonged skin contact.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application. Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

9. Physical and Chemical Properties

Appearance:	Aerosolized Mist	**Physical State:**	Liquid
Odor:	Mild	**Odor Threshold:**	N.E.
Relative Density:	0.845	**pH:**	N.D.
Freeze Point, °C:	N.D.	**Viscosity:**	N.D.
Solubility in Water:	Miscible	**Partition Coefficient, n-octanol/ water:**	No Information
Decompostion Temp., °C:	No Information		
Boiling Range, °C:	-34 - 415	**Explosive Limits, vol%:**	0.9 - 12.6
Flammability:	Supports Combustion	**Flash Point, °C:**	-105
Evaporation Rate:	Faster than Ether	**Auto-ignition Temp., °C:**	No Information
Vapor Density:	Heavier than Air	**Vapor Pressure:**	N.D.

(See "Other information" Section for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition. Avoid contact with strong acid and strong bases.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological information

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes Serious Eye Irritation

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Substance may cause slight skin irritation. Prolonged or repeated contact may cause skin irritation. May cause skin irritation. Allergic reactions are possible.

EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Aspiration hazard if swallowed; can enter lungs and cause damage. Harmful if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

ACUTE TOXICITY VALUES
The acute effects of this product have not been tested. Data on individual components are tabulated below:

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
64742-89-8	Aliphatic Hydrocarbon	N.I.	3000 mg/kg Rabbit	N.I.
1330-20-7	Xylene	4300 mg/kg Rat	N.I.	47635 mg/L Rat
64742-47-8	Hydrotreated Light Distillate	>5000 mg/kg Rat	>2000 mg/kg Rabbit	>5.2 mg/L Rat
64742-88-7	Mineral Spirits	>5000 mg/kg Rat	3000 mg/kg Rabbit	>5.28 mg/L Rat
100-41-4	Ethylbenzene	3500 mg/kg Rat	15354 mg/kg Rabbit	17.2 mg/L Rat

N.I. - No Information

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components. Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state, and federal regulations and ordinances. Do not allow to enter waterways, wastewater, soil, storm drains or sewer systems.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)	TDG (Canada)
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Xylene	1330-20-7
Ethylbenzene	100-41-4

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

Chemical Name	CAS-No.
Acetaldehyde	75-07-0

Inventory Information

Country	Value
USA (TSCA)	No Information
Canada (DSL)	No Information
Mexico(INSQ)	No Information
Europe (EINECS)	No Information
Japan (ENCS)	No Information
Philippines (PICCS)	No Information
China (IECSC)	No Information
Australia (AICS)	No Information
Korea (KECI)	No Information
New Zealand (NZIOC)	No Information

No Information

CALIFORNIA PROPOSITION 65:

Warning: This products contains a substance known to the State of California to cause cancer.

Chemical Name	CAS-No.
Ethylbenzene	100-41-4

CALIFORNIA PROPOSITION 65 REPRODUCTIVE TOXINS

Warning: This product contains a substance known to the State of California to cause birth defects or other reproductive harm.

No Proposition 65 Reproductive Toxins exist in this product.

International Regulations:

CANADIAN WHMIS:

This SDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

16. Other Information

HMIS RATINGS

Health: 2* **Flammability:** 4 **Physical Hazard:** 0 **Personal Protection:** X

CANADIAN WHMIS CLASS: B2 D2A

NFPA RATINGS

Health: 2 **Flammability:** 4 **Instability** 0

VOLATILE ORGANIC COMPOUNDS, g/L: 545

MSDS REVISION DATE: 8/27/2014

REASON FOR REVISION: No Information

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Text for GHS Hazard Statements shown in Section 3 describing each ingredient:

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H331	Toxic if inhaled.
H332	Harmful if inhaled.

Icons for GHS Pictograms shown in Section 3 describing each ingredient:

GHS02

GHS06

GHS07

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	PTOUCH SSPR 6PK GLOSS CLEAR 11 OZ	Revision Date:	09/29/2004
Identification Number:	1901830		
Product Use/Class:	Painters Touch Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Department, Regulatory		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Acetone	67-64-1	30.0	500 PPM	750 PPM	750 PPM	N.E.
Liquified Petroleum Gas	68476-86-8	30.0	1000 PPM	N.E.	1000 PPM	N.E.
Toluene	108-88-3	20.0	50 PPM	150 PPM	200 PPM	300 PPM
N-Butyl Acetate	123-86-4	10.0	150 PPM	200 PPM	150 PPM	N.E.
Aliphatic Hydrocarbon	64742-89-8	5.0	300 PPM	N.E.	300 PPM	N.E.
Aromatic Hydrocarbon	64742-95-6	5.0	N.E.	N.E.	N.E.	N.E.
1,2,4-Trimethylbenzene	95-63-6	5.0	25 PPM	N.E.	N.E.	N.E.
Ethylbenzene	100-41-4	0.1	100 PPM	125 PPM	100 PPM	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Extremely flammable liquid and vapor. Harmful if swallowed.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). May cause central nervous system disorder (e,g.,narcosis involving a loss of coordination, weakness, fatigue,

mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. Overexposure to toluene in laboratory animals has been associated with liver abnormalities, kidney, lung and spleen damage. Effects in humans have included liver and cardiac abnormalities.

Primary Route(s) Of Entry: Skin Absorption, Inhalation, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Hold eyelids apart and flush with plenty of water for at least 15 minutes. Get medical attention.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F
(Setaflash)

LOWER EXPLOSIVE LIMIT: 1.0 %
UPPER EXPLOSIVE LIMIT : 12.8 %

Extinguishing Media: Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: Perforation of the pressurized container may cause bursting of the can. Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Isolate from heat, electrical equipment, sparks and open flame.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust.

Section 7 - Handling And Storage

Handling: Avoid breathing vapor or mist. Use only in a well-ventilated area. Wash hands before eating. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Wash thoroughly after handling.

Storage: Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of

NFPA Class I flammable liquids. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not expose to heat or store above 120 ° F.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Boiling Range:	-44 - 698 F	Vapor Density:	Heavier than air
Odor:	Solvent	Odor Threshold:	ND
Appearance:	Liquid	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight		
Freeze Point:	ND	Specific Gravity:	0.746
Vapor Pressure:	ND	PH:	ND
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Product LD50: ND

Product LC50: ND

Chemical Name	LD50	LC50
Acetone	N.D.	N.D.
Liquified Petroleum Gas	N.D.	N.D.
Toluene	N.D.	N.D.
N-Butyl Acetate	13100 mg/kg (ORAL, RAT)	2000 PPM (INH 4 Hr, RAT)
Aliphatic Hydrocarbon	N.D.	N.D.
Aromatic Hydrocarbon	N.D.	N.D.
1,2,4-Trimethylbenzene	N.D.	18000 mg/m3 (RAT, 4 HR)
Ethylbenzene	3500 mg/kg (ORAL, RAT)	N.D.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Aerosol	Packing Group:	---
DOT Technical Name:	---	Hazard Subclass:	2.1
DOT Hazard Class:	2	Resp. Guide Page:	126
DOT UN/NA Number:	UN1950		

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA `Hazard Categories' promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Toluene	108-88-3
1,2,4-Trimethylbenzene	95-63-6
Ethylbenzene	100-41-4

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Acrylic Resin	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Acrylic Resin	PROPRIETARY

California Proposition 65:

WARNING! This product contains a chemical(s) known by the State of California to cause cancer.

WARNING! This poduct contains a chemical(s) known to the state of California to cause birth defects or other reporductive harm.

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: A B5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Reactivity: 0 Personal Protection: X

VOLATILE ORGANIC COMPOUNDS, g/l: 586

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	PTOUCH +SSPR 6PK GLOSS DEEP BLUE 12 OZ	Revision Date:	06/09/2011
Identification Number:	1927830		
Product Use/Class:	Topcoat/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Acetone	67-64-1	40.0	500 ppm	750 ppm	1000 ppm	N.E.
Liquefied Petroleum Gas	68476-86-8	30.0	N.E.	N.E.	N.E.	N.E.
Naphtha	8032-32-4	10.0	N.E.	N.E.	N.E.	N.E.
Xylene	1330-20-7	5.0	100 ppm	150 ppm	100 ppm	N.E.
Solvent Naptha, Light Aromatic	64742-95-6	5.0	N.E.	N.E.	N.E.	N.E.
1,2,4-Trimethylbenzene	95-63-6	5.0	25 ppm	N.E.	N.E.	N.E.
Ethylbenzene	100-41-4	5.0	100 ppm	125 ppm	100 ppm	N.E.
Titanium Dioxide	13463-67-7	5.0	10 mg/m3	N.E.	15 mg/m3 (Total Dust)	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Harmful if swallowed. Extremely flammable liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by

IARC. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula.
May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Water Fog

Unusual Fire And Explosion Hazards: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Isolate from heat, electrical equipment, sparks and open flame. Keep containers tightly closed. Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Perforation of the pressurized container may cause bursting of the can.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust.

Section 7 - Handling And Storage

Handling: Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Use only in a well-ventilated area. Avoid breathing vapor or mist. Wash thoroughly after handling. Wash hands before eating.

Storage: Contents under pressure. Do not expose to heat or store above 120 ° F. Do not store above 120 ° F.

Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment.

Respiratory Protection: A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Aerosolized Mist	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight	Freeze Point:	N.D.
Specific Gravity:	0.750	pH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid all possible sources of ignition. Avoid temperatures above 120 ° F.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition, it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Liquefied Petroleum Gas	N.E.	N.E.
Naphtha	>5000 mg/kg (Rat, Oral)	N.E.
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Solvent Naptha, Light Aromatic	4700 mg/kg (Rat, Oral)	3670 mg/kg (Rat, Inhalation)
1,2,4-Trimethylbenzene	N.E.	18000 mg/m3 (Rat, 4Hr)
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	Yes	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD, PRESSURIZED GAS HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Xylene	1330-20-7
1,2,4-Trimethylbenzene	95-63-6
Ethylbenzene	100-41-4

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Reactivity: 0 Personal Protection: X

NFPA Ratings:

Health: 2 Flammability: 4 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 511

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is

the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name: Painters Touch Aerosol Top Coats

Revision Date: 01/28/2008

Identification Number: 1925830, 1931830, 1941830, 1952830, 1961830, 1962830, 1965830, 1922830, 1926830, 1930830, 1933830, 1938830, 1945830, 1946830, 1949830, 1950830, 1953830, 1963830, 1964830, 1966830, 1974830, 1976830, 1977830, 1979830, 1982830, 1986830, 1992830, 1994830, 1995830, 1996830, 1924830, 1927830, 1934830, 1947830, 1948830, 1951830, 1971830, 1972830, 1973830, 1975830, 1990830, 1993830, 1970830, 225191, 224356, 224357, 224358, 224359, 240255, 240217, 240268, 239242, 239243, 239244, 239245, 240250, 240251, 240252, 240253, 240254, 240256, 240257, 240258, 240259, 240260, 240262, 240263, 240264, 240265, 240266, 240267, 240269, 240280, 240281, 240282, 240283, 240554, 244895

Product Use/Class: Topcoats/Aerosol

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Preparer: Regulatory Department

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Acetone	67-64-1	40.0	500 PPM	750 PPM	750 PPM	N.E.
Liquefied Petroleum Gas	68476-86-8	35.0	1000 PPM	N.E.	1000 PPM	N.E.
Toluene	108-88-3	25.0	50 PPM	150 PPM	200 PPM	300 PPM
Aliphatic Petroleum Distillates	64742-48-9	20.0	400 PPM	N.E.	400 PPM	N.E.
Titanium Dioxide	13463-67-7	20.0	10 mg/m3	N.E.	10 mg/m3	N.E.
Xylene	1330-20-7	15.0	100 PPM	150 PPM	100 PPM	N.E.
Aromatic Solvent	64742-95-6	10.0	N.E.	N.E.	N.E.	N.E.
Naphtha	8032-32-4	10.0	300 PPM	N.E.	N.E.	N.E.
Stoddard Solvents	8052-41-3	10.0	100 PPM	N.E.	500 PPM	N.E.
Magnesium Silicate	14807-96-6	10.0	10 mg/m3	N.E.	15 mg/m3	N.E.
Ethylbenzene	100-41-4	5.0	100 PPM	125 PPM	100 PPM	N.E.
Aluminum Flake	7429-90-5	5.0	10 mg/m3	N.E.	15 mg/m3	N.E.
Aromatic Hydrocarbon	64742-95-6	5.0	N.E.	N.E.	N.E.	N.E.
Ethylene Glycol Monobutyl Ether	111-76-2	5.0	20 PPM	N.E.	50 PPM	N.E.
1,2,4-Trimethylbenzene	95-63-6	5.0	25 PPM	N.E.	N.E.	N.E.
Calcined Aluminum Silicate	1332-58-7	5.0	2 mg/m3	N.E.	5 mg/m3	N.E.
Pigment Red 122	980-26-7	5.0	15mg/m3	N.E.	5mg/m3	N.E.
Pigment Black 7	1333-86-4	5.0	3.5 mg/m3	N.E.	3.5 mg/m3	N.E.
Pigment Violet 32	12225-08-0	1.0	N.E.	N.E.	N.E.	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Contents Under Pressure. Extremely flammable liquid and vapor. Harmful if swallowed.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: May be harmful if absorbed through skin. Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing vapors or mists.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula.
May cause central nervous system disorder (e,g.,narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. Overexposure to toluene in laboratory animals has been associated with liver abnormalities, kidney, lung and spleen damage. Effects in humans have included liver and cardiac abnormalities. Contains carbon black. Chronic inflammation, lung fibrosis, and lung tumors have been observed in some rats experimentally exposed for long periods of time to excessive concentrations of carbon black and several insoluble fine dust particles. Tumors have not been observed in other animal species (i.e., mouse and hampster) under similar circumstances and study conditions. Epidemiological studies of North American workers show no evidence of clinically significant adverse health effects due to occupational exposure to carbon black.
Carbon black is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC and is proposed to be listed as A4- "not classified as a human carcinogen" by the American Conference of Govermental Industrial Hygienists. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of carbon black in the formula.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Hold eyelids apart and flush with plenty of water for at least 15 minutes. Get medical attention.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F
(Setaflash)

LOWER EXPLOSIVE LIMIT: 0.7 %
UPPER EXPLOSIVE LIMIT : 32.5 %

Extinguishing Media: Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Perforation of the pressurized container may cause bursting of the can. Isolate from heat, electrical equipment, sparks and open flame. Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust.

Section 7 - Handling And Storage

Handling: Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Use only in a well-ventilated area. Wash hands before eating. Wash thoroughly after handling. Avoid breathing vapor or mist.

Storage: Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use explosion-proof ventilation equipment. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Respiratory Protection: A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Boiling Range:	-34 - 999 F	Vapor Density:	Heavier than air
Odor:	Solvent Like	Odor Threshold:	ND
Appearance:	Liquid	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight		
Freeze Point:	ND	Specific Gravity:	0.8110
Vapor Pressure:	ND	PH:	NE
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Flammable hydrogen gas will evolve when product comes in contact with water or damp air. Heat will be generated. The amount of heat generated will depend upon the volume of material in contact. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Product LD50: ND

Product LC50: ND

Chemical Name	LD50	LC50
Acetone	N.D.	N.D.
Liquefied Petroleum Gas	N.D.	N.D.
Toluene	636 mg/kg (Oral, Rat)	49 gm/M3 (Inhalation, Rat)
Aliphatic Petroleum Distillates	N.D.	N.D.
Titanium Dioxide	>7500 mg/kg (ORAL, RAT)	N.D.
Xylene	4300, mg/kg (Oral Rat)	5000 ppm/4hr (Inhalation, Rat)
Aromatic Solvent	4700 mg/kg (ORAL, RAT)	3670 mg/kg (INH, RAT)
Naphtha	>5000 mg/kg (ORAL, RAT)	N.D.
Stoddard Solvents	N.D.	N.D.
Magnesium Silicate	N.D.	TCLo:11mg/m3 inh.
Ethylbenzene	3500 mg/kg (ORAL, RAT)	N.D.
Aluminum Flake	N.D.	N.D.
Aromatic Hydrocarbon	N.D.	N.D.
Ethylene Glycol Monobutyl Ether	1519 mg/kg (ORAL, MOUSE)	700 PPM (INH 7 Hr, RAT)
1,2,4-Trimethylbenzene	N.D.	18000 mg/m3 (RAT, 4 HR)

Calcined Aluminum Silicate	5000 mg/kg (ORAL RAT)	N.D.
Pigment Red 122	N.D.	N.D.
Pigment Black 7	>8000 mg/kg (ORAL, RAT)	N.D.
Pigment Violet 32	>10000 mg/kg (ORAL, RAT)	N.D.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Aerosols	Packing Group:	---
DOT Technical Name:	---	Hazard Subclass:	---
DOT Hazard Class:	2.1	Resp. Guide Page:	126
DOT UN/NA Number:	UN1950		

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Toluene	108-88-3
Xylene	1330-20-7
Ethylbenzene	100-41-4
Ethylene Glycol Monobutyl Ether	111-76-2
1,2,4-Trimethylbenzene	95-63-6

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None known

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY
Modified Alkyd	PROPRIETARY
Acrylic Copolymer	PROPRIETARY
Barium Sulfate	7727-43-7
Calcium Carbonate	1317-65-3
Yellow Iron Oxide	51274-00-1
Iron Oxide	1309-37-1

California Proposition 65:

WARNING! This product contains a chemical(s) known by the State of California to cause cancer.

WARNING! This product contains a chemical(s) known to the state of California to cause birth defects or other reproductive harm.

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5, D2A, D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Reactivity: 0 Personal Protection: X

VOLATILE ORGANIC COMPOUNDS, g/l: NA

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

1. Identification

Product Name: PTOUCH +SSPR 6PK GLOSS BLACK 12 OZ **Revision Date:** 7/17/2014

Product Number: 1979830

Product Use/Class: Topcoat/Aerosol

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Prepared by: Regulatory Department

2. Hazard Identification

EMERGENCY OVERVIEW: Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Contents Under Pressure. May cause eye, skin, or respiratory tract irritation. KEEP OUT OF REACH OF CHILDREN. Harmful if inhaled. Harmful if swallowed. Causes eye irritation. Use ventilation necessary to keep exposures below recommended exposure limits, if any. Vapor Harmful. Causes Eye, Skin, Nose, and Throat Irritation.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes Serious Eye Irritation

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May cause skin irritation. Allergic reactions are possible.

EFFECTS OF OVEREXPOSURE - INHALATION: High gas, vapor, mist or dust concentrations may be harmful if inhaled. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains carbon black. Chronic inflammation, lung fibrosis, and lung tumors have been observed in some rats experimentally exposed for long periods of time to excessive concentrations of carbon black and several insoluble fine dust particles. Tumors have not been observed in other animal species (i.e., mouse and hamster) under similar circumstances and study conditions. Epidemiological studies of North American workers show no evidence of clinically significant adverse health effects due to occupational exposure to carbon black.

Carbon black is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC and is proposed to be listed as A4- "not classified as a human carcinogen" by the American Conference of Governmental Industrial Hygienists. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of carbon black in the formula. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

3. Composition/Information On Ingredients

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING

Acetone	67-64-1	40.0	500 ppm	750 ppm	1000 ppm	N.E.
Liquefied Petroleum Gas	68476-86-8	25.0	N.E.	N.E.	N.E.	N.E.
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	10.0	200 mg/m3	N.E.	N.E.	N.E.
Solvent Naptha, Light Aromatic	64742-95-6	5.0	N.E.	N.E.	N.E.	N.E.
1,2,4-Trimethylbenzene	95-63-6	5.0	25 ppm	N.E.	N.E.	N.E.
Xylene	1330-20-7	5.0	100 ppm	150 ppm	100 ppm	N.E.
1,3,5-Trimethylbenzene	108-67-8	5.0	25 ppm	N.E.	N.E.	N.E.
Carbon Black	1333-86-4	1.0	3 mg/m3	N.E.	3.5 mg/m3	N.E.
Ethylbenzene	100-41-4	1.0	20 ppm	125 ppm	100 ppm	N.E.

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention. If swallowed, get medical attention.

5. Fire-fighting Measures

Flash Point, °F -156 (Setaflash)

Extinguishing Media: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR!Water spray may be ineffective. Closed containers may explode when exposed to extreme heat due to buildup of steam. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. No unusual fire or explosion hazards noted. Keep containers tightly closed.

SPECIAL FIREFIGHTING PROCEDURES: Full protective equipment including self-contained breathing apparatus should be used. Evacuate area and fight fire from a safe distance. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and launder before reuse. Use only with adequate ventilation. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Avoid contact with eyes, skin and clothing.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials. Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep away from heat, sparks, flame and sources of ignition. Avoid excess heat.

8. Exposure Controls/Personal Protection

ENGINEERING CONTROLS: Use explosion-proof ventilation equipment. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use gloves to prevent prolonged skin contact. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

9. Physical and Chemical Properties

Vapor Density	Heavier than Air	**Odor:**	Solvent Like
Appearance:	Aerosolized Mist	**Evaporation Rate:**	Faster than Ether
Solubility in Water:	Slight	**Freeze Point:**	N.D.
Specific Gravity:	0.737	**pH:**	N.D.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120 ° F. Avoid contact with strong acid and strong bases. Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological Information

Chemical Name	LD50	LC50
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Liquefied Petroleum Gas	N.E.	N.E.
Naphtha, Petroleum, Hydrotreated Light	N.E.	N.E.
Solvent Naptha, Light Aromatic	4700 mg/kg (Rat, Oral)	3670 mg/kg (Rat, Inhalation)
1,2,4-Trimethylbenzene	3280 mg/kg (Oral, Rat)	18,000 mg/m3 (Inhalation, Rat, 4 hr)
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
1,3,5-Trimethylbenzene	1303 mg/kg (Rat, Oral)	24 mg/m3 (Rat, 4Hr)
Carbon Black	>8000 mg/kg (Rat, Oral)	N.E.
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state, and federal regulations and ordinances. Do not allow to enter waterways, wastewater, soil, storm drains or sewer systems.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)	TDG (Canada)
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
1,2,4-Trimethylbenzene	95-63-6
Xylene	1330-20-7
Ethylbenzene	100-41-4

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b) components exist in this product.

International Regulations:

CANADIAN WHMIS:

This SDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

Canadian WHMIS Class: AB5 D2A

16. Other Information

HMIS Ratings:

Health:	2*	**Flammability:**	4	**Physical Hazard:**	0	**Personal Protection:**	X

NFPA Ratings:

Health:	2	**Flammability:**	4	**Instability**	0

VOLATILE ORGANIC COMPOUNDS, g/L: 516

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name: Painters Touch Aerosol Top Coats

Revision Date: 02/27/2006

Identification Number: 1925830, 1931830, 1941830, 1952830, 1961830, 1962830, 1965830, 1922830, 1926830, 1930830, 1933830, 1938830, 1945830, 1946830, 1949830, 1950830, 1953830, 1963830, 1964830, 1966830, 1967830, 1974830, 1976830, 1977830, 1979830, 1982830, 1986830, 1992830, 1994830, 1995830, 1996830, 1924830, 1927830, 1934830, 1947830, 1948830, 1951830, 1971830, 1972830, 1973830, 1975830, 1990830, 1993830, 1979830, 1970830, 225191, 224356, 224357, 224358, 224359

Product Use/Class: Topcoats/Aerosol

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Preparer: Regulatory Department

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Acetone	67-64-1	40.0	500 PPM	750 PPM	750 PPM	N.E.
Liquefied Petroleum Gas	68476-86-8	35.0	1000 PPM	N.E.	1000 PPM	N.E.
Aliphatic Petroleum Distillates	64742-89-8	20.0	400 PPM	N.E.	400 PPM	N.E.
Toluene	108-88-3	20.0	50 PPM	150 PPM	200 PPM	300 PPM
Titanium Dioxide	13463-67-7	15.0	10 mg/m3	N.E.	10 mg/m3	N.E.
Xylene	1330-20-7	15.0	100 PPM	150 PPM	100 PPM	N.E.
Aromatic Solvent	64742-95-6	10.0	N.E.	N.E.	N.E.	N.E.
Naphtha	8032-32-4	10.0	300 PPM	N.E.	N.E.	N.E.
Stoddard Solvents	8052-41-3	10.0	100 PPM	N.E.	500 PPM	N.E.
Magnesium Silicate	14807-96-6	5.0	10 mg/m3	N.E.	15 mg/m3	N.E.
Ethylbenzene	100-41-4	5.0	100 PPM	125 PPM	100 PPM	N.E.
Aliphatic Hydrocarbon	64742-89-8	5.0	300 PPM	N.E.	300 PPM	N.E.
Aromatic Hydrocarbon	64742-95-6	5.0	N.E.	N.E.	N.E.	N.E.
1,2,4-Trimethylbenzene	95-63-6	5.0	25 PPM	N.E.	N.E.	N.E.
Ethylene Glycol Monobutyl Ether	111-76-2	5.0	20 PPM	N.E.	50 PPM	N.E.
Pigment Red 122	980-26-7	5.0	15mg/m3	N.E.	5mg/m3	N.E.
Pigment Black 7	1333-86-4	5.0	3.5 mg/m3	N.E.	3.5 mg/m3	N.E.
Pigment Violet 32	12225-08-0	0.1	N.E.	N.E.	N.E.	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Extremely flammable liquid and vapor. Harmful if swallowed.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: May be harmful if absorbed through skin. Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: Harmful if inhaled. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. High gas, vapor, mist or dust concentrations may be harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). May cause central nervous system disorder (e,g.,narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. Overexposure to toluene in laboratory animals has been associated with liver abnormalities, kidney, lung and spleen damage. Effects in humans have included liver and cardiac abnormalities.
Contains carbon black. Chronic inflammation, lung fibrosis, and lung tumors have been observed in some rats experimentally exposed for long periods of time to excessive concentrations of carbon black and several insoluble fine dust particles. Tumors have not been observed in other animal species (i.e., mouse and hampster) under similar circumstances and study conditions. Epidemiological studies of North American workers show no evidence of clinically significant adverse health effects due to occupational exposure to carbon black.
Carbon black is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC and is proposed to be listed as A4- "not classified as a human carcinogen" by the American Conference of Govermental Industrial Hygienists. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of carbon black in the formula.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Hold eyelids apart and flush with plenty of water for at least 15 minutes. Get medical attention.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F
(Setaflash)

LOWER EXPLOSIVE LIMIT: 0.7 %
UPPER EXPLOSIVE LIMIT : 32.5 %

Extinguishing Media: Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Perforation of the pressurized container may cause bursting of the can. Isolate from heat, electrical equipment, sparks and open flame. Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Avoid breathing vapor or mist. Wash hands before eating. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Wash thoroughly after handling. Use only in a well-ventilated area.

Storage: Contents under pressure. Do not expose to heat or store above 120 ° F. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Boiling Range:	-34 - 999 F	Vapor Density:	Heavier than air
Odor:	Solvent Like	Odor Threshold:	ND
Appearance:	Liquid	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight		
Freeze Point:	ND	Specific Gravity:	
Vapor Pressure:		PH:	NE
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid all possible sources of ignition. Avoid temperatures above 120 ° F.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition, it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Product LD50: ND

Product LC50: ND

Chemical Name	LD50	LC50
Acetone	N.D.	N.D.
Liquefied Petroleum Gas	N.D.	N.D.
Aliphatic Petroleum Distillates	N.D.	N.D.
Toluene	N.D.	N.D.
Titanium Dioxide	>7500 mg/kg (ORAL, RAT)	N.D.
Xylene	N.D.	N.D.
Aromatic Solvent	4700 mg/kg (ORAL, RAT)	3670 mg/kg (INH, RAT)
Naphtha	>5000 mg/kg (ORAL, RAT)	N.D.
Stoddard Solvents	N.D.	N.D.
Magnesium Silicate	N.D.	TCLo:11mg/m3 inh.
Ethylbenzene	3500 mg/kg (ORAL, RAT)	N.D.
Aliphatic Hydrocarbon	N.D.	N.D.
Aromatic Hydrocarbon	N.D.	N.D.
1,2,4-Trimethylbenzene	N.D.	18000 mg/m3 (RAT, 4 HR)
Ethylene Glycol Monobutyl Ether	1519 mg/kg (ORAL, MOUSE)	700 PPM (INH 7 Hr, RAT)
Pigment Red 122	N.D.	N.D.
Pigment Black 7	>8000 mg/kg (ORAL, RAT)	N.D.
Pigment Violet 32	>10000 mg/kg (ORAL, RAT)	N.D.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Aerosol	Packing Group:	---
DOT Technical Name:	---	Hazard Subclass:	---
DOT Hazard Class:	2.1	Resp. Guide Page:	126
DOT UN/NA Number:	UN1950		

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Toluene	108-88-3
Xylene	1330-20-7
Ethylbenzene	100-41-4
1,2,4-Trimethylbenzene	95-63-6
Ethylene Glycol Monobutyl Ether	111-76-2

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None known

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY
Modified Alkyd	PROPRIETARY
Barium Sulfate	7727-43-7
Calcium Carbonate	1317-65-3
Red Iron Oxide	1332-37-2
Iron Oxide	1309-37-1

California Proposition 65:

WARNING! This product contains a chemical(s) known by the State of California to cause cancer.

WARNING! This product contains a chemical(s) known to the state of California to cause birth defects or other reproductive harm.

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5, D2A, D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Reactivity: 0 Personal Protection: X

VOLATILE ORGANIC COMPOUNDS, g/l: NA

REASON FOR REVISION:

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	STRUST SSPR 6PK HAMMER BROWN	Revision Date:	09/30/2011
Identification Number:	210880		
Product Use/Class:	Hammered Finish/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Acetone	67-64-1	40.0	500 ppm	750 ppm	1000 ppm	N.E.
Liquefied Petroleum Gas	68476-86-8	25.0	N.E.	N.E.	N.E.	N.E.
Naphtha	8032-32-4	15.0	N.E.	N.E.	N.E.	N.E.
Xylene	1330-20-7	5.0	100 ppm	150 ppm	100 ppm	N.E.
Propylene Glycol Monobutyl Ether	5131-66-8	5.0	N.E.	N.E.	N.E.	N.E.
Ethylbenzene	100-41-4	5.0	100 ppm	125 ppm	100 ppm	N.E.
Carbon Black	1333-86-4	1.0	3.5 mg/m3	N.E.	3.5 mg/m3	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Contents Under Pressure. Vapors may cause flash fire or explosion. Harmful if swallowed. Extremely flammable liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing vapors or mists.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness,

fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage.

Contains carbon black. Chronic inflammation, lung fibrosis, and lung tumors have been observed in some rats experimentally exposed for long periods of time to excessive concentrations of carbon black and several insoluble fine dust particles. Tumors have not been observed in other animal species (i.e., mouse and hamster) under similar circumstances and study conditions. Epidemiological studies of North American workers show no evidence of clinically significant adverse health effects due to occupational exposure to carbon black.

Carbon black is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC and is proposed to be listed as A4- "not classified as a human carcinogen" by the American Conference of Governmental Industrial Hygienists. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of carbon black in the formula.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

Unusual Fire And Explosion Hazards: Perforation of the pressurized container may cause bursting of the can. Isolate from heat, electrical equipment, sparks and open flame. Keep containers tightly closed. Vapors can travel to a source of ignition and flash back. Vapors may form explosive mixtures with air. Closed containers may explode when exposed to extreme heat. FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Wash hands before eating. Use only in a well-ventilated area. Avoid breathing vapor or mist. Wash thoroughly after handling. Follow all MSDS/label precautions even after container is emptied because it may retain product residues.

Storage: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Aerosolized Mist	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight	Freeze Point:	ND
Specific Gravity:	0.753	pH:	NE
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition, it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Liquefied Petroleum Gas	N.E.	N.E.
Naphtha	>5000 mg/kg (Rat, Oral)	N.E.
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Propylene Glycol Monobutyl Ether	2200 mg/kg (Rat, Oral)	N.E.
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.
Carbon Black	>8000 mg/kg (Rat, Oral)	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	Yes	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD, PRESSURIZED GAS HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Xylene	1330-20-7
Ethylbenzene	100-41-4

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Physical Hazard: 0 Personal Protection: X

NFPA Ratings:

Health: 2 Flammability: 4 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 498

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or

liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	HARDHT LSPR STRIPE YELLOW STRIPING	Revision Date:	09/09/2003
Identification Number:	2348838		
Product Use/Class:	Striping Paint/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Department, Regulatory		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Liquified Petroleum Gas	68476-86-8	25.0	1000 PPM	N.E.	1000 PPM	N.E.
Modified Alkyd	PROPRIETARY	15.0	N.E.	N.E.	N.E.	N.E.
Aliphatic Hydrocarbon	MIXTURE	10.0	300 PPM	N.E.	300 PPM	N.E.
Toluene	108-88-3	10.0	50 PPM	N.E.	200 PPM	300 PPM
Naphtha	8032-32-4	10.0	300 PPM	N.E.	N.E.	N.E.
Titanium Dioxide	13463-67-7	5.0	10 mg/m3	N.E.	10 mg/m3	N.E.
Acetone	67-64-1	5.0	500 PPM	750 PPM	750 PPM	N.E.
Stoddard Solvents	8052-41-3	5.0	100 PPM	N.E.	500 PPM	N.E.
Aromatic Hydrocarbon	64742-95-6	5.0	N.E.	N.E.	N.E.	N.E.
Xylene	1330-20-7	5.0	100 PPM	150 PPM	100 PPM	N.E.
1,2,4-Trimethylbenzene	95-63-6	5.0	25 PPM	N.E.	N.E.	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Contents Under Pressure. Vapors may cause flash fire or explosion. Extremely flammable liquid and vapor. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Harmful if swallowed.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing vapors or mists. High vapor concentrations are irritating to the eyes, nose, throat and lungs.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: May cause central nervous system disorder (e,g.,narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. Overexposure to toluene in laboratory animals has been associated with liver abnormalities, kidney, lung and spleen damage. Effects in humans have included liver and cardiac abnormalities.

Primary Route(s) Of Entry: Skin Absorption, Inhalation, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Hold eyelids apart and flush with plenty of water for at least 15 minutes. Get medical attention.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F
(Setaflash)

LOWER EXPLOSIVE LIMIT: 0.9
UPPER EXPLOSIVE LIMIT : 12.8

Extinguishing Media: Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: Keep containers tightly closed. Perforation of the pressurized container may cause bursting of the can. Vapors can travel to a source of ignition and flash back. Vapors may form explosive mixtures with air. Closed containers may explode when exposed to extreme heat. FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective. Isolate from heat, electrical equipment, sparks and open flame.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust.

Section 7 - Handling And Storage

Handling: Use only in a well-ventilated area. Avoid breathing vapor or mist. Wash thoroughly after handling. Wash hands before eating. Follow all MSDS/label precautions even after container is emptied because it may retain product residues.

Storage: Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

Respiratory Protection: A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Boiling Range:	69 - 415 F	Vapor Density:	Heavier than Air
Odor:	Solvent Like	Odor Threshold:	ND
Appearance:	Liquid	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight		
Freeze Point:	N.D.	Specific Gravity:	0.942
Vapor Pressure:	ND	PH:	N.E.
Physical State:	Liquid	Viscosity:	

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid all possible sources of ignition. Avoid temperatures above 120 ° F.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Product LD50: N.D.

Product LC50: N.D.

Chemical Name	LD50	LC50
Liquified Petroleum Gas	N.D.	N.D.
Modified Alkyd	N.D.	N.D.
Aliphatic Hydrocarbon	N.D.	N.D.
Toluene	N.D.	N.D.
Naphtha	>5000 mg/kg (ORAL, RAT)	N.D.
Titanium Dioxide	>7500 mg/kg (ORAL, RAT)	N.D.
Acetone	N.D.	N.D.
Stoddard Solvents	N.D.	N.D.
Aromatic Hydrocarbon	N.D.	N.D.
Xylene	N.D.	N.D.
1,2,4-Trimethylbenzene	N.D.	18000 mg/m3 (RAT, 4 HR)

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Aerosol	Packing Group:	---
DOT Technical Name:	---	Hazard Subclass:	1
DOT Hazard Class:	2	Resp. Guide Page:	126
DOT UN/NA Number:	UN1950		

Section 15 - Regulatory Information

The following components are not subject to reporting in Section 2:

Chemical Name	CAS Number	Wt% Less Than
Calcium Carbonate	1317-65-3	30.0
Yellow Iron Oxide	51274-00-1	1.0

Magnesium Carbonate	546-93-0	1.0
Pigment Yellow 139	36888-99-0	1.0
Ethylbenzene	100-41-4	1.0
1,3,5-Trimethylbenzene	108-67-8	1.0
Microcrystalline Silica	14808-60-7	1.0
Modified Polyethylene Wax	PROPRIETARY	1.0
Fumed Silica	68909-20-6	1.0
Soybean Lecithin	8030-76-0	1.0
Diethylbenzene, Mixed Isomers	25340-17-4	1.0
Zirconium Alkanoate Drier	22464-99-9	1.0
Methyl Ethyl Ketoxime	96-29-7	0.1
Cumene	98-82-8	0.1
Red Iron Oxide	1332-37-2	0.1
Pigment Red 188	61847-48-1	0.1
Amorphous Precipitated Silica	112926-00-8	0.1
Aluminum Hydroxide	21645-51-2	0.1
Long Oil Alkyd Resin	PROPRIETARY	0.1
Mineral Spirits	64742-88-7	0.1
Cobalt 2-Ethylhexanoate	136-52-7	0.1
Cobalt Alkanoate Drier	27253-31-2	0.1
Cobalt hydroxide	21041-93-0	0.1
Amorphous Silica	7631-86-9	0.1
Lead Compounds	NOT SPECIFIED	0.1
Cadmium Compounds	NOT SPECIFIED	0.1
Benzene	71-43-2	0.1
Arsenic Compounds	NOT SPECIFIED	0.1
Nickel Compounds	NOT SPECIFIED	0.1
Formaldehyde	50-00-0	0.1
Acetaldehyde	75-07-0	0.1
Mercury Compounds	NOT SPECIFIED	0.1

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Toluene	108-88-3
Aromatic Hydrocarbon	64742-95-6
Xylene	1330-20-7
1,2,4-Trimethylbenzene	95-63-6

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Calcium Carbonate	1317-65-3

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Calcium Carbonate	1317-65-3

California Proposition 65:

Warning: The following ingredients present in the product are known to the state of California to cause Cancer:

Chemical Name	CAS Number
Microcrystalline Silica	14808-60-7
Lead Compounds	NOT SPECIFIED
Cadmium Compounds	NOT SPECIFIED
Benzene	71-43-2
Arsenic Compounds	NOT SPECIFIED
Nickel Compounds	NOT SPECIFIED
Formaldehyde	50-00-0
Acetaldehyde	75-07-0

Warning: The following ingredients present in the product are known to the state of California to cause birth defects, or other reproductive hazards.

Chemical Name	CAS Number
Toluene	108-88-3
Lead Compounds	NOT SPECIFIED
Cadmium Compounds	NOT SPECIFIED
Benzene	71-43-2
Arsenic Compounds	NOT SPECIFIED
Mercury Compounds	NOT SPECIFIED

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Reactivity: 0 Personal Protection: X

VOLATILE ORGANIC COMPOUNDS, GR/LTR: 508

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	ENAMEL 5-GL 3100 SAFETY YELLOW	Revision Date:	12/22/2010
Identification Number:	3144300		
Product Use/Class:	Topcoat/ Waterbased Acrylic		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Titanium Dioxide	13463-67-7	5.0	10 mg/m3	N.E.	15 mg/m3 (Total Dust)	N.E.
Ester Alcohol	25265-77-4	5.0	N.E.	N.E.	N.E.	N.E.
Aqueous Ammonia	1336-21-6	5.0	25 ppm	35 ppm	50 ppm	N.E.
Butyl Benzyl Phthalate	85-68-7	5.0	N.E.	N.E.	N.E.	N.E.
Aromatic Petroleum Distillates	64742-94-5	5.0	N.E.	N.E.	N.E.	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Harmful if swallowed. Causes eye irritation. Vapors irritating to eyes and respiratory tract. Combustible liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: May cause skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. May cause headaches and dizziness. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula.
Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: 142 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Water Fog

Unusual Fire And Explosion Hazards: Keep containers tightly closed.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Avoid contact with eyes. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing vapor or mist. Wash thoroughly after handling. Wash hands before eating.

Storage: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Keep away from heat, sparks, flame and sources of ignition. Keep container closed when not in use.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Ammonia Like
Appearance:	Liquid	Evaporation Rate:	Slower than Ether
Solubility in H2O:	Slight	Freeze Point:	N.D.
Specific Gravity:	1.085	pH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.
Ester Alcohol	6517 mg/kg (Rat, Oral)	>3.55 mg/L (Rat, Inhalation, 6Hr)
Aqueous Ammonia	N.E.	N.E.
Butyl Benzyl Phthalate	2330 mg/kg (Rat, Oral)	>6.7 mg/L (Rat, Inhalation, 4Hr)
Aromatic Petroleum Distillates	4900 mg/kg (Rat, Oral)	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Paint, Not Regulated	Paint, Not Regulated	Paint, Not Regulated
Hazard Class:	N.A.	N.A.	N.A.
UN Number:	N.A.	N.A.	N.A.
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	No	No

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Aqueous Ammonia	1336-21-6
Aromatic Petroleum Distillates	64742-94-5

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Water	7732-18-5
Modified Acrylic Copolymer	PROPRIETARY
Ethylene Glycol Monobutyl Ether	111-76-2
Aqueous Pigment Yellow 74 Dispersion	MIXTURE

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Water	7732-18-5
Modified Acrylic Copolymer	PROPRIETARY
Ethylene Glycol Monobutyl Ether	111-76-2
Aqueous Pigment Yellow 74 Dispersion	MIXTURE

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: B3 D2A D2B

Section 16 - Other Information

NFPA Ratings:

Health: 2 Flammability: 2 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 234

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

View Section : 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

SECTION 1: CHEMICAL PRODUCT and COMPANY IDENTIFICATION 3192 402

Product Name:	**WHITE 9503127**
Manufacturer MSDS.:	3192 402
Manufacturer Name:	Rust-Oleum Corporation
Address:	11 Hawthorn Parkway Vernon Hills Illinois 60061
General Use:	SPEEDY DRY DTM WATERBASE PAINT
Revision Date:	04/30/01
Comments:	Supplier: Rust-Oleum Corporation, 11 Hawthorn Parkway, Vernon Hills, Illinois, 60061 USA, (847) 367-7700 Rust-Oleum Corp.,8:00 AM-4:30 PM/24-hr Emer.Assist
Product Codes:	3192 402

HMIS

HEALTH	1
FIRE	0
REACTIVITY	0
PPE	

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SECTION 2 : COMPOSITION, INFORMATION ON INGREDIENTS 3192 402

Ingredient Name	CAS#	Ingredient Percent
TITANIUM DIOXIDE PIGMENT EC Index Number: 1	13463-67-7	< 15.0 % by Weight
ETHYLENE GLYCOL MONOBUTYL ETHER EC Index Number: 1	111-76-2	< 5.0 % by Weight
PROPYLENE GLYCOL(100%) EC Index Number: 1	57-55-6	< 5.0 % by Weight
BUTYL BENZYL PHTHALATE EC Index Number: 1	85-68-7	< 5.0 % by Weight
ESTER ALCOHOL EC Index Number: 1	25265-77-4	< 5.0 % by Weight
AROMATIC PETROLEUM DISTILLATES EC Index Number: 1	64742-94-5	< 5.0 % by Weight

Comments: See Section 16 for abbreviation legend

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SECTION 3 : HAZARDS IDENTIFICATION 3192 402

Emergency Overview: Causes eye irritation. Use ventilation necessary to keep exposures below recommended exposure limits, if any.

Applies to All Ingredients :

Route of Exposure: INHALATION EYE CONTACT

Potential Health Effects:

- Eye Contact: Causes eye irritation.
- Skin Contact: May cause skin irritation. May be harmful if absorbed through skin.
- Inhalation: Low hazard for usual industrial handling or commercial handling by trained personnel.
- Ingestion: Substance may be harmful if swallowed.

Chronic Health Effects: Contains: Propylene Glycol. Human systemic effects by ingestion: general anesthesia, convulsions, changes in surface EEG.

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SECTION 4 : FIRST AID MEASURES 3192 402

Eye Contact: Hold eyelids apart and flush with plenty of water for at lease 15 minutes. Get medical attention.

Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

Inhalation:	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.
Ingestion:	Swallowing less than an ounce will not cause significant harm. For larger amounts, do not induce vomiting, but give one or two glasses of water to drink and get medical attention.

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SECTION 5 : FIRE FIGHTING MEASURES 3192 402

Flash Point:	N.A.
Upper Flammable or Explosive Limit:	12.7 %
Lower Flammable or Explosive Limit:	0.6 %
Auto Ignition Temperature:	ND
Extinguishing Media:	DRY CHEMICAL FOAM
Fire Fighting Instructions:	Water may be used to cool closed containers to prevent buildup of steam.
Unusual Fire Hazards:	FLASH POINT IS TESTED TO BE GREATER THAN 212 DEGREES F (>100 DEGREES C).

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SECTION 6 : ACCIDENTAL RELEASE MEASURES 3192 402

Spill Cleanup Measures:	Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

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SECTION 7 : HANDLING and STORAGE 3192 402

Handling:	Wash thoroughly after handling. Wash hands before eating. Avoid contact with eyes.
Storage:	Keep from freezing. Keep container closed when not in use.
Hygiene Practices:	Wash thoroughly with soap and water before eating, drinking or smoking.

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SECTION 8 : EXPOSURE CONTROLS, PERSONAL PROTECTION 3192 402

Engineering Controls:	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.
Skin Protection Description:	Use gloves to prevent prolonged skin contact. Nitrile or Neoprene gloves may afford adequate skin protection.
Eye/Face Protection:	Use safety eyewear designed to protect against splash of liquids.
Respiratory Protection:	A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.
Other Protective:	Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Ingredient Guidelines

Ingredient: AROMATIC PETROLEUM DISTILLATES

Guideline Information: ACGIH TLV-TWA: N.E.; ACGIH TLV-STEL: N.E.; OSHA PEL-TWA: 100 PPM; OSHA PEL-CEILING: N.E.; MEXICAN TLV-TWA: N.E.; SKIN: NO;

Ingredient: BUTYL BENZYL PHTHALATE

Guideline Information: ACGIH TLV-TWA: 5 MG/M^3; ACGIH TLV-STEL: N.E.; OSHA PEL-TWA: 5 MG/M^3; OSHA PEL-CEILING: N.E.; MEXICAN TLV-TWA: N.E.; SKIN: NO;

Ingredient: ESTER ALCOHOL

Guideline Information: ACGIH TLV-TWA: N.E.; ACGIH TLV-STEL: N.E.; OSHA PEL-TWA: N.E.; OSHA PEL-CEILING: N.E.; MEXICAN TLV-TWA: N.E.; SKIN: NO;

Ingredient: ETHYLENE GLYCOL MONOBUTYL ETHER

Guideline Information: ACGIH TLV-TWA: 25 PPM; ACGIH TLV-STEL: N.E.; OSHA PEL-TWA: 50 PPM; OSHA PEL-CEILING: N.E.; MEXICAN TLV-TWA: N.E.; SKIN: YES;

Ingredient: PROPYLENE GLYCOL(100%)

Guideline Information: ACGIH TLV-TWA: N.E.; ACGIH TLV-STEL: N.E.; OSHA PEL-TWA: N.E.; OSHA PEL-CEILING: N.E.; MEXICAN TLV-TWA: N.E.; SKIN: NO;

Ingredient: TITANIUM DIOXIDE PIGMENT

Guideline Information: ACGIH TLV-TWA: 10 mg/m3; ACGIH TLV-STEL: N.E.; OSHA PEL-TWA: 15 mg/m3; OSHA PEL-CEILING: N.E.; MEXICAN TLV-TWA: N.E.; SKIN: NO;

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SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES 3192 402

Physical State/Appearance:	LIQUID
Odor:	AMMONIA-LIKE
Physical State:	LIQUID
pH:	ND (@ 0.0 %)
Vapor Pressure:	ND
Vapor Density:	Is heavier than air
Boiling Point:	212 - 698 F
Freezing Point:	ND
Solubility in Water:	SOLUBLE
Specific Gravity:	1.0675
Evaporation Point:	Is faster than Ether
Viscosity:	ND
Odor Threshold:	ND

Coefficient of Water/Oil Distribution:	ND
Comment:	See Section 16 for abbreviation legend

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SECTION 10 : STABILITY and REACTIVITY 3192 402

Chemical Stability:	This product is stable under normal storage conditions.
Conditions to Avoid:	Avoid contact with strong acid and strong bases.
Incompatibilities with Other Materials:	Incompatible with strong oxidizing agents, strong acids and strong alkalies.
Hazardous Polymerization:	Will not occur under normal conditions.
Hazardous Decomposition Products:	By open flame, carbon monoxide and carbon dioxide. When heated to decomposition it emits acrid smoke and irritating fumes.

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SECTION 11 : TOXICOLOGICAL INFORMATION 3192 402

Toxicological Paragraph:	TITANIUM DIOXIDE PIGMENT- LD50: N.A. LC50: N.A.; ETHYLENE GLYCOL MONOBUTYL ETHER- LD50: MOUSE 1519MG/KG LC50: MOUSE 700PPM 7HR ; PROPYLENE GLYCOL(100%)- LD50: RAT 20G/KG LC50: N.D.; BUTYL BENZYL PHTHALATE- LD50: RAT 2330MG/KG LC50: RAT >6.7MG/L 4HR ; ESTER ALCOHOL- LD50: RAT 6.86ML/KG LC50: RAT >2.75MG/L 6HR ; AROMATIC PETROLEUM DISTILLATES- LD50: 4900mg/kg(rat) LC50: N.E.;

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SECTION 12 : ECOLOGICAL INFORMATION 3192 402

Ecological Paragraph:	Product is a mixture of listed components. According to our raw material suppliers, all components are listed on the TSCA Inventory as required or meet the polymer exemption as defined in Section 5.5.2 of the Toxic Substances Control Act.

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SECTION 13 : DISPOSAL CONSIDERATIONS 3192 402

Waste Disposal:	Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

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SECTION 14 : TRANSPORT INFORMATION 3192 402

DOT Shipping Name:	PAINT

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SECTION 15 : REGULATORY INFORMATION 3192 402

Applies to all ingredients:

CERCLA Section 103:	This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories: CHRONIC HEALTH HAZARD FIRE HAZARD
Section 313 Toxic Release Form:	This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372: ETHYLENE GLYCOL MONOBUTYL ETHER (CAS: 111-76-2; PERCENT: LESS THAN 5.0 %) ;
OSHA 29 CFR 1200:	Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)
State:	NEW JERSEY RIGHT-TO-KNOW: The following materials are non-hazardous, but are among the top five components in this product: WATER DEIONIZED (CAS: 7732-18-5) ; ACRYLIC RESIN (CAS: NOT AVAILABLE) ; Water (CAS: 7732-18-5) ; PENNSYLVANIA RIGHT-TO-KNOW: The following non-hazardous ingredients are present in the product at greater than 3%: WATER DEIONIZED (CAS: 7732-18-5) ; ACRYLIC RESIN (CAS: NOT AVAILABLE) ; Water (CAS: 7732-18-5) ;CALIFORNIA PROPOSITION 65: WARNING: The chemical(s) noted below and contained in this product, are known to the state of California to cause cancer, birth defects or other reproductive harm: According to our raw material suppliers no Proposition 65 chemicals exist in this product above OSHA de minimus levels. All products comply with label provisions of Proposition 65.
Canada WHMIS:	This MSDS has been prepared in compliance with Controlled Product Regulations except for use of the 16 headings.CANADIAN WHMIS CLASS: D2B

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SECTION 16 : ADDITIONAL INFORMATION 3192 402

HMIS:

Health Hazard:	1

Fire Hazard:	0
Reactivity:	0
MSDS Revision Date:	06/28/00
MSDS Author:	MTM
MSDS Author Phone No.:	847-816-2445

Disclaimer:

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.

Comment:	N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined : No Information.
REASONS FOR REVISION	WHMIS CLASS ADDITION

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Downloaded 8/23/07

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	Stops Rust Metallic Aerosol	Revision Date:	12/14/2006
Identification Number:	7250830, 7251830, 7252830, 7253830, 7254830, 7255830, 7256830, 7257830, 7270830, 7271830, 7272830, 7273830, 7274830, 7275830, 7277830, 7278830		
Product Use/Class:	Metallic Topcoats/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA
Toluene	108-88-3	40.0	50 PPM	150 PPM	200 PPM
Liquefied Petroleum Gas	68476-86-8	35.0	1000 PPM	N.E.	1000 PPM
Acetone	67-64-1	30.0	500 PPM	750 PPM	750 PPM
Xylene	1330-20-7	10.0	100 PPM	150 PPM	100 PPM
Aluminum Flake	7429-90-5	5.0	10 mg/m3	N.E.	15 mg/m3
Propylene Glycol Monomethyl Ether Acetate	108-65-6	5.0	N.E.	N.E.	30 p.p.m. (Supplier recommendation
Ethylbenzene	100-41-4	5.0	100 PPM	125 PPM	100 PPM
Stoddard Solvents	8052-41-3	5.0	100 PPM	N.E.	500 PPM

Section 3 - Hazards Identification

*** Emergency Overview ***: Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Extremely flammable liquid and vapor. Harmful if swallowed.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). May cause central nervous system disorder (e,g.,narcosis involving a loss of coordination, weakness, fatigue,

mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. Overexposure to toluene in laboratory animals has been associated with liver abnormalities, kidney, lung and spleen damage. Effects in humans have included liver and cardiac abnormalities.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Hold eyelids apart and flush with plenty of water for at least 15 minutes. Get medical attention.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F
(Setaflash)

LOWER EXPLOSIVE LIMIT: 0.8 %
UPPER EXPLOSIVE LIMIT : 32.5 %

Extinguishing Media: Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: Perforation of the pressurized container may cause bursting of the can. Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Wash hands before eating. Use only in a well-ventilated area. Wash thoroughly after handling. Avoid breathing vapor or mist. Follow all MSDS/label precautions even after container is emptied because it may retain product residues.

Storage: Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of

NFPA Class I flammable liquids. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not expose to heat or store above 120 ° F.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment.

Respiratory Protection: A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Boiling Range:	-34 - 698 F	Vapor Density:	Heavier than air
Odor:	Solvent Like	Odor Threshold:	ND
Appearance:	Liquid	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight		
Freeze Point:	ND	Specific Gravity:	
Vapor Pressure:		PH:	NE
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Flammable hydrogen gas will evolve when product comes in contact with water or damp air. Heat will be generated. The amount of heat generated will depend upon the volume of material in contact. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition, it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Product LD50: ND

Product LC50: ND

Chemical Name	LD50	LC50
Toluene	N.D.	N.D.
Liquefied Petroleum Gas	N.D.	N.D.
Acetone	N.D.	N.D.
Xylene	N.D.	N.D.
Aluminum Flake	N.D.	N.D.
Propylene Glycol Monomethyl Ether Acetate	>10000 mg/kg (ORAL, RAT)	N.D.
Ethylbenzene	3500 mg/kg (ORAL, RAT)	N.D.
Stoddard Solvents	N.D.	N.D.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Aerosol	Packing Group:	---
DOT Technical Name:	---	Hazard Subclass:	---
DOT Hazard Class:	2.1	Resp. Guide Page:	126
DOT UN/NA Number:	UN1950		

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Toluene	108-88-3
Xylene	1330-20-7
Ethylbenzene	100-41-4

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None known

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Acrylic Resin	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Acrylic Resin	PROPRIETARY
Acrylic Resin	PROPRIETARY

California Proposition 65:

WARNING! This product contains a chemical(s) known by the State of California to cause cancer.

WARNING! This product contains a chemical(s) known to the state of California to cause birth defects or other reproductive harm.

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5, D2A, D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2 Flammability: 4 Reactivity: 0 Personal Protection: X

VOLATILE ORGANIC COMPOUNDS, g/l: NA

REASON FOR REVISION:

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.

M A T E R I A L S A F E T Y D A T A S H E E T

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : ALUMINUM 9704268
IDENTIFICATION NUMBER: 7515 838
DATE PRINTED : 11/03/97

PRODUCT USE/CLASS : PROFESSIONAL SPRAY

SUPPLIER:
Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, Illinois
60061 USA

(847) 367-7700 Rust-Oleum Corp.
Mon.-Fri, 8:00 AM-4:30 PM

MANUFACTURER:
Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, Illinois
60061 USA

(847) 367-7700 Rust-Oleum Corp.
Mon.-Fri, 8:00 AM-4:30 PM

PREPARER: LJW, PHONE: , PREPARE DATE: 07/22/97

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT % LESS THAN
01	TOLUENE	108-88-3	60.0 %
02	PROPANE	74-98-6	25.0 %
03	N-BUTANE	106-97-8	10.0 %
04	ISOBUTANE	75-28-5	5.0 %
05	Leafing Aluminum Paste	7429-90-5	5.0 %
06	Stoddard Solvent	8052-41-3	5.0 %

EXPOSURE LIMITS

ITEM	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING	COMPANY TLV-TWA	SKIN
01	50 PPM	N.E.	200 PPM	300 PPM	N.E.	YES
02	ASPHYXIANT	N.E.	1000 PPM	N.E.	N.E.	YES
03	800 PPM	N.E.	N.E.	N.E.	N.E.	NO
04	N.E.	N.E.	N.E.	N.E.	N.E.	NO
05	N.E.	N.E.	N.E.	N.E.	N.E.	NO
06	100ppm	N.E.	100ppm	N.E.	N.E.	NO

(See Section 16 for abbreviation legend)

(Continued on Page 2)

SECTION 3 - HAZARDS IDENTIFICATION

*** EMERGENCY OVERVIEW ***: Harmful if inhaled. Harmful if swallowed. Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Substance may cause slight skin irritation. Prolonged or repeated contact may cause skin irritation.

EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing vapors or mists. High vapor concentrations are irritating to the eyes, nose, throat and lungs.

EFFECTS OF OVEREXPOSURE - INGESTION: Substance may be harmful if swallowed. Aspiration hazard if swallowed; can enter lungs and cause damage.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: May cause central nervous system disorder (e,g.,narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen and eye damage as well as anemia. Effects in humans have included liver and cardiac
abnormalities. Overexposure to toluene in laboratory animals has been associated with liver abnormalities, kidney, lung and spleen damage. Effects
in humans have included liver and cardiac abnormalities.

PRIMARY ROUTE(S) OF ENTRY: INHALATION EYE CONTACT

SECTION 4 - FIRST AID MEASURES

FIRST AID - EYE CONTACT: Hold eyelids apart and flush with plenty of water for at lease 15 minutes. Get medical attention.

FIRST AID - SKIN CONTACT: Wash with soap and water. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: No Information.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

(Continued on Page 3)

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: *** F

LOWER EXPLOSIVE LIMIT: 1.0 %
UPPER EXPLOSIVE LIMIT: 9.5 %

AUTOIGNITION TEMPERATURE: ND

EXTINGUISHING MEDIA: DRY CHEMICAL FOAM WATER FOG

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20 DEG. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective. Closed containers may explode when exposed to extreme heat due to buildup of steam. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. Closed containers may explode when exposed to extreme heat.

SPECIAL FIREFIGHTING PROCEDURES: Evacuate area and fight fire from a safe distance.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Evacuate the area, remove all sources of ignition and ventilate well. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Wash thoroughly after handling. Wash hands before eating. Use only in a well-ventilated area. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing vapor or mist.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Do not store above 120 degrees F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 degrees F.

(Continued on Page 4)

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace

conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

SKIN PROTECTION: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE	: -44 - 383 F	VAPOR DENSITY	: Is heavier than air
ODOR	: SOLVENT	ODOR THRESHOLD	: ND
APPEARANCE	: LIQUID	EVAPORATION RATE	: Is faster than Ether
SOLUBILITY IN H2O	: SLIGHT		
FREEZE POINT	: ND	SPECIFIC GRAVITY	: 0.9428
VAPOR PRESSURE	: ND	pH @ 0.0 %	: ND
PHYSICAL STATE	: Liquid	VISCOSITY	: ND

COEFFICIENT OF WATER/OIL DISTRIBUTION: ND

(See Section 16 for abbreviation legend)

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Avoid temperatures above 120 degrees F. Avoid all

possible sources of ignition.

(Continued on Page 5)

SECTION 10 - STABILITY AND REACTIVITY

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION PRODUCTS: By open flame, carbon monoxide and carbon dioxide.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

SECTION 11 - TOXICOLOGICAL PROPERTIES

COMPONENT TOXICOLOGICAL INFORMATION:

CHEMICAL NAME	LD50	LC50
TOLUENE	RAT 5000MG/KG	MOUSE 5320PPM 8HR
PROPANE	N.E.	N.E.
N-BUTANE	RAT 658G/M^3 4HR	N.E.
ISOBUTANE	N.E.	N.E.
Leafing Aluminum Paste	Rat>5000mg/kg.	N.A.
Stoddard Solvent	4900mg/kg(rat)	N.E.

SECTION 12 - ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

SECTION 13 - DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

SECTION 14 - TRANSPORTATION INFORMATION

No transportation information is available.

SECTION 15 - REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: AS FOLLOWS -

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR

(Continued on Page 6)

SECTION 15 - REGULATORY INFORMATION

1910.1200)

CERCLA - SARA HAZARD CATEGORY:
This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD CHRONIC HEALTH HAZARD FIRE HAZARD PRESSURIZED GAS HAZARD

SARA SECTION 313:
This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	WT/WT % IS LESS THAN
TOLUENE	108-88-3	60.0 %
XYLENE	1330-20-7	1.0 %
ETHYLBENZENE	100-41-4	1.0 %
1,2,4-TRIMETHYLBENZENE	95-63-6	0.1 %

TOXIC SUBSTANCES CONTROL ACT:
This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

CHEMICAL NAME	CAS NUMBER
No information is available.	

U.S. STATE REGULATIONS: AS FOLLOWS -

NEW JERSEY RIGHT-TO-KNOW:
The following materials are non-hazardous, but are among the top five components in this product:

CHEMICAL NAME	CAS NUMBER
ACRYLIC RESIN SOLN.	MIXTURE

PENNSYLVANIA RIGHT-TO-KNOW:
The following non-hazardous ingredients are present in the product at greater than 3%:

CHEMICAL NAME	CAS NUMBER
ACRYLIC RESIN SOLN.	MIXTURE

CALIFORNIA PROPOSITION 65:

(Continued on Page 7)

SECTION 15 - REGULATORY INFORMATION

WARNING: The chemical(s) noted below and contained in this product, are known to the state of California to cause cancer, birth defects or other reproductive harm:

CHEMICAL NAME	CAS NUMBER
TOLUENE	108-88-3

INTERNATIONAL REGULATIONS: AS FOLLOWS -

CANADIAN WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for use of the 16 headings.

CANADIAN WHMIS CLASS: No information available.

SECTION 16 - OTHER INFORMATION

HMIS RATINGS - HEALTH: FLAMMABILITY: REACTIVITY:

PREVIOUS MSDS REVISION DATE: 06/11/97

LEGEND: N.A. - Not Applicable, N.E. - Not Established,
N.D. - Not Determined

: No Information.

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.

RUST-OLEUM CORPORATION -- 7718 METALLIC TOPCOATS -- 8010-00F016126
==========
MSDS Safety Information
==========
FSC: 8010
MSDS Date: 07/27/1990
MSDS Num: BKFTX
LIIN: 00F016126
Tech Review: 05/30/1991
Product ID: 7718 METALLIC TOPCOATS
Responsible Party
Cage: DO883
Name: RUST-OLEUM CORPORATION
Address: 11 HAWTHORN PARKWAY
City: VERNON HILLS IL 60061
Country: NK
Info Phone Number: (708) 367-7700
Emergency Phone Number: (708) 367-7700
==========
Preparer Co. when other than Responsible Party Co.
==========
Cage: DO883
Assigned Ind: Y
Name: RUST-OLEUM CORPORATION
Address: 11 HAWTHORNE PARKWAY
City: VERNON HILLS IL 60061-1583
==========
Contractor Summary
==========
Cage: 08882
Name: RUST-OLEUM CORP
Address: 11 HAWTHORN PARKWAY
City: VERNON HILLS IL 60061-1583 US
Phone: 847-367-7700
Cage: DO883
Name: RUST-OLEUM CORPORATION
Address: 11 HAWTHORNE PARKWAY
City: VERNON HILLS IL 60061-1583 US
==========
Ingredients
==========
Cas: 108-88-3
RTECS #: XS5250000
Name: TOLUENE (SARA III)
% by Wt: 50-60%
Other REC Limits: 100 PPM
OSHA PEL: 200 PPM/150 STEL
ACGIH TLV: 50 PPM; 9293
EPA Rpt Qty: 1000 LBS
DOT Rpt Qty: 1000 LBS
Ozone Depleting Chemical: N

Cas: 74-98-6
RTECS #: TX2275000
Name: PROPANE
% by Wt: <30%
Other REC Limits: 1800 MG/CUM
OSHA PEL: 1000 PPM
ACGIH TLV: ASPHYXIANT; 9192

Ozone Depleting Chemical: N

Cas: 106-97-8
RTECS #: EJ4200000
Name: BUTANE
% by Wt: <30%
Other REC Limits: 800 PPM
OSHA PEL: 800 PPM
ACGIH TLV: 800 PPM; 9192
Ozone Depleting Chemical: N

Cas: 75-28-5
RTECS #: TZ4300000
Name: ISOBUTANE, 2-METHYLPROPANE
% by Wt: <30%
Other REC Limits: 1000 PPM
OSHA PEL: 1800 MG/CUM
ACGIH TLV: 1000 PPM
Ozone Depleting Chemical: N
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Health Hazards Data
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Route Of Entry Inds - Inhalation: YES
Skin: YES
Ingestion: YES
Carcinogenicity Inds - NTP: NO
IARC: NO
OSHA: NO
Effects of Exposure: INHALATION: HARMFUL, DIZZINESS, HEADACHE, NAUSEA, STAGGERING GAIT, CONFUSION, UNCONSCIOUSNESS, NOSE/THROAT IRRITATION, & COMA. SKIN: IRRITATION & DERMATITIS. EYE: IRRITATION. INGESTION: GASTROINTESTIN AL IRRITATION, NAUSEA, VOMITING, DIARRHEA, CHEMICAL PNEUMONITIS, & FATAL.
Explanation Of Carcinogenicity: NONE
Signs And Symptions Of Overexposure: INHALATION: HARMFUL, FATAL, PERMANENT BRAIN/NERVOUS SYSTEM DAMAGE, LIVER & CARDIAC ABNORMALITIES. SKIN: IRRITATION & DERMATITIS. EYE: IRRITATION. INGESTION: GASTROINTESTINAL IRRITATION, NAUSEA, VOMITI NG, DIARRHEA, CHEMICAL PNEUMONITIS, & FATAL.
First Aid: INHALATION: REMOVE TO FRESH AIR. GIVE CPR OR OXYGEN IF NEEDED. EYES: FLUSH W/PLENTY OF WATER FOR AT LEAST 15 MINS. SKIN: WASH W/SOAP & WATER. INGESTION: DON'T INDUCE VOMITING. KEEP PERSON WARM & QUIET . ASPIRATION OF MATERIAL INTO THE LUNGSCAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL. OBTAIN MEDICAL ATTENTION IN ALL CASES.
==========
Handling and Disposal
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Spill Release Procedures: REMOVE ALL SOURCES OF IGNITION. VENTILATE AREA. REMOVE W/INERT ABSORBENT & NON-SPARKING TOOLS.
Waste Disposal Methods: DISPOSE OF IN ACCORDANCE W/LOCAL, STATE, & FEDERAL REGULATIONS. DON'T INCINERATE/PUNCTURE CONTAINERS. EXTREMELY FLAMMABLE. DOT: CONSUMER COMMODITY ORM-D.
Handling And Storage Precautions: DON'T STORE >120F OR PUNCTURE CONTAINERS. KEEP CONTAINERS TIGHTLY CLOSED. DON'T APPLY TO HOT SURFACES.
Other Precautions: AVOID CONTACT W/SKIN. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING & INHALING THE CONTENTS CAN BE HARMFUL OR FATAL.
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Fire and Explosion Hazard Information
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Flash Point Method: TCC

Flash Point Text: <0F
Lower Limits: 1.0%
Extinguishing Media: USE NFPA CLASS B EXTINGUISHERS (CO2, DRY CHEMICAL, & FOAM).
Fire Fighting Procedures: USE SELF-CONTAINED BREATHING APPARATUS W/FULL PROTECTIVE EQUIPMENT. WATER MAY BE INEFFECTIVE. FOG NOZZLES PREFERRED.
Unusual Fire/Explosion Hazard: COOL CLOSED CONTAINERS W/WATER TO PREVENT PRESSURE BUILDUP, AUTOIGNITION, OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT. EXTREMELY FLAMMABLE.

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Control Measures

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Respiratory Protection: USE NIOSH APPROVED CHEMICAL CARTRIDGE RESPIRATOR (TC23C) TO REMOVE SOLID AIRBORNE PARTICLES OF OVERSPRAY & ORGANIC VAPORS DURING SPRAY APPLICATION. IN CONFINED AREAS, USE NIOSH APPROVED SUPPLIED-AIR R ESPIRATORS OR HOODS (TC19C).
Ventilation: PROVIDE GENERAL DILUTION OR LOCAL EXHAUST VENTILATION IN VOLUME & PATTERN TO KEEP <TLV.
Protective Gloves: IMPERVIOUS
Eye Protection: SAFETY GLASSES
Other Protective Equipment: IMPERVIOUS CLOTHING
Work Hygienic Practices: REMOVE/LAUNDER CONTAMINATED CLOTHING BEFORE REUSE.

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Physical/Chemical Properties

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B.P. Text: <0F
Vapor Pres: 22.0
Vapor Density: >AIR
Evaporation Rate & Reference: SLOWER THAN ETHER

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Reactivity Data

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Stability Indicator: YES
Stability Condition To Avoid: HEAT, ELECTRICAL EQUIPMENT, SPARKS, OPEN FLAME, HOT SURFACES, SOURCES OF IGNITION, & TEMPS >120F.
Materials To Avoid: STRONG OXIDIZING AGENTS
Hazardous Decomposition Products: CO & CO2.
Hazardous Polymerization Indicator: NO

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Toxicological Information

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Ecological Information

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MSDS Transport Information

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Regulatory Information

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Other Information

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HAZCOM Label

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Product ID: 7718 METALLIC TOPCOATS
Cage: DO883
Company Name: RUST-OLEUM CORPORATION

Street: 11 HAWTHORNE PARKWAY
City: VERNON HILLS IL
Zipcode: 60061-1583 US
Health Emergency Phone: (708) 367-7700
Date Of Label Review: 12/16/1998
Label Date: 12/16/1998
Hazard And Precautions: INHALATION: HARMFUL, DIZZINESS, HEADACHE, NAUSEA, STAGGERING GAIT, CONFUSION, UNCONSCIOUSNESS, NOSE/THROAT IRRITATION, & COMA. SKIN: IRRITATION & DERMATITIS. EYE: IRRITATION. INGESTION: GASTROINTESTIN AL IRRITATION, NAUSEA, VOMITING, DIARRHEA, CHEMICAL PNEUMONITIS, & FATAL.
INHALATION: HARMFUL, FATAL, PERMANENT BRAIN/NERVOUS SYSTEM DAMAGE, LIVER & CARDI AC ABNORMALITIES. SKIN: IRRITATION & DERMATITIS. EYE: IRRITATION. INGESTION: GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, DIARRHEA, CHEMICAL PNEUMONITIS, & FATAL.

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Disclaimer (provided with this information by the compiling agencies):
This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever expressly or implied warrants, states, or intends said information to have any application, use or viability by or to any person or persons outside the Department of Defense nor any person or persons contracting with any instrumentality of the United States of America and disclaims all liability for such use. Any person utilizing this instruction who is not a military or civilian employee of the United States of America should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation regardless of similarity to a corresponding Department of Defense or other government situation.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	STRUST +SSPR 6PK GLOSS ROYAL BLUE	Revision Date:	09/28/2011
Identification Number:	7727830		
Product Use/Class:	Topcoat/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Acetone	67-64-1	35.0	500 ppm	750 ppm	1000 ppm	N.E.
Liquefied Petroleum Gas	68476-86-8	30.0	N.E.	N.E.	N.E.	N.E.
Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
n-Butyl Acetate	123-86-4	10.0	150 ppm	200 ppm	150 ppm	N.E.
Ethylbenzene	100-41-4	5.0	100 ppm	125 ppm	100 ppm	N.E.
Titanium Dioxide	13463-67-7	5.0	10 mg/m3	N.E.	15 mg/m3 (Total Dust)	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Harmful if swallowed. Extremely flammable liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on

duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula.
May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

Unusual Fire And Explosion Hazards: Keep containers tightly closed. FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Perforation of the pressurized container may cause bursting of the can. Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Isolate from heat, electrical equipment, sparks and open flame.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Wash thoroughly after handling. Wash hands before eating. Use only in a well-ventilated area. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing vapor or mist.

Storage: Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks

and open flame. Contents under pressure. Do not expose to heat or store above 120 ° F.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use explosion-proof ventilation equipment.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Aerosolized Mist	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight	Freeze Point:	N.D.
Specific Gravity:	0.779	pH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid all possible sources of ignition. Avoid temperatures above 120 ° F.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Liquefied Petroleum Gas	N.E.	N.E.
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
n-Butyl Acetate	13100 mg/kg (Rat, Oral)	2000 ppm (Rat, Inhalation, 4 Hr)
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	Yes	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD, PRESSURIZED GAS HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Xylene	1330-20-7
Ethylbenzene	100-41-4

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Modified Alkyd Resin	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Modified Alkyd Resin	PROPRIETARY
Barium Sulfate	7727-43-7

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Physical Hazard: 0 Personal Protection: X

NFPA Ratings:

Health: 2 Flammability: 4 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 509

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

RUST-OLEUM CORPORATION

1. Identification

Product Name: PRO 1-GL 2PK GLOSS REGAL RED **Revision Date:** 9/3/2013

Product Number: 7765402

Product Use/Class: Topcoat/Alkyd

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Prepared by: Regulatory Department

2. Hazard Identification

EMERGENCY OVERVIEW: May cause eye, skin, or respiratory tract irritation. KEEP OUT OF REACH OF CHILDREN. Harmful if inhaledCauses eye irritation. Combustible liquid and vapor. Use ventilation necessary to keep exposures below recommended exposure limits, if any.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Substance causes moderate eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Substance may cause slight skin irritation.

EFFECTS OF OVEREXPOSURE - INHALATION: High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Irritating to the nose, throat and respiratory tract. Harmful if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B).

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

3. Composition/Information On Ingredients

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Stoddard Solvents	8052-41-3	40.0	100 ppm	N.E.	500 ppm	N.E.
Mineral Spirits	64742-88-7	15.0	100 ppm	N.E.	100 ppm	N.E.
Pigment Red 170	2786-76-7	5.0	N.E.	N.E.	5 mg/m3	N.E.
Ethylbenzene	100-41-4	1.0	20 ppm	125 ppm	100 ppm	N.E.

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: If swallowed, get medical attention.

5. Fire-fighting Measures

Flash Point, °F 104 (Setaflash)

Extinguishing Media: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: No unusual fire or explosion hazards noted. Closed containers may explode when exposed to extreme heat due to buildup of steam. Keep containers tightly closed. Combustible liquid and vapor.

SPECIAL FIREFIGHTING PROCEDURES: Evacuate area and fight fire from a safe distance. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and launder before reuse. Use only with adequate ventilation. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Avoid contact with eyes, skin and clothing.

STORAGE: Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class II combustible liquids. Avoid excess heat.

8. Exposure Controls/Personal Protection

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

SKIN PROTECTION: Use gloves to prevent prolonged skin contact. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

9. Physical and Chemical Properties

Vapor Density	Heavier than Air	**Odor:**	Solvent Like
Appearance:	Liquid	**Evaporation Rate:**	Slower than Ether
Solubility in Water:	Slight	**Freeze Point:**	N.D.
Specific Gravity:	0.926	**pH:**	N.D.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120 ° F. Avoid contact with strong acid and strong bases.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological Information

Chemical Name	LD50	LC50
Stoddard Solvents	>5000 mg/kg (Rat, Oral)	N.E.
Mineral Spirits	>5000 mg/kg (Rat, Oral)	>1400 ppm (Rat, Inhalation, 4Hr)
Pigment Red 170	N.E.	N.E.
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter waterways, wastewater. soil, storm drains or sewer systems.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)	TDG (Canada)
UN Number:	N.A.	1263	1263	N.A.
Proper Shipping Name:	Not Regulated	Paint	Paint	Not Regulated
Hazard Class:	N.A.	3	3	N.A.
Packing Group:	N.A.	III	III	N.A.
Limited Quantity:	No	Yes, >5L No	Yes, >5L No	No

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Ethylbenzene	100-41-4

Xylene	1330-20-7
Neodecanoic Acid, Cobalt Salt	27253-31-2

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA components exist in this product.

International Regulations:

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

Canadian WHMIS Class: B3 D2A D2B

16. Other Information

HMIS Ratings:

Health: 2* **Flammability:** 2 **Physical Hazard:** 0 **Personal Protection:** X

NFPA Ratings:

Health: 2 **Flammability:** 2 **Instability** 0

VOLATILE ORGANIC COMPOUNDS, g/L: 444

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	STRUST QT 4PK FLAT RUSTY METAL PRIMER	Revision Date:	12/06/2010
Identification Number:	7769504		
Product Use/Class:	Primer/ Alkyd		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Mineral Spirits	64742-88-7	30.0	100 ppm	N.E.	100 ppm	N.E.
Magnesium Silicate	14807-96-6	10.0	2 mg/m3	N.E.	0.1 mg/m3 (Respirable)	N.E.
Calcium Metasilicate	13983-17-0	5.0	N.E.	N.E.	N.E.	N.E.
Quartz (Crystalline Silica)	14808-60-7	5.0	0.025 mg/m3 (Respirable)	N.E.	2.4 mppcf (Respirable)	N.E.
Ethylbenzene	100-41-4	1.0	100 ppm	125 ppm	100 ppm	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: High vapor concentrations can irritate eyes, nose and respiratory passages. Causes nose and throat irritation. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Harmful if swallowed. Causes eye irritation. Flammable liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated skin contact may cause irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. May cause headaches and dizziness. Avoid breathing vapors or mists. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Contains Calcium Silicate (Wollastonite), which is an IARC 3 Agent "unclassifiable as to carcinogenicity to humans" via inhalation. Inhalation exposure to Calcium Silicate is not anticipated through brush application nor normal use. Calcium Silicate is NOT classified as a carcinogen by NIOSH, ACGIH, NTP nor OSHA.

Contains crystalline silica as silicon dioxide. Excessive inhalation of respirable crystalline silica dust may cause lung disease, silicosis or lung cancer. Significant exposure is not anticipated during brush or trowel application or drying. Risk of overexposure depends on the duration and level of exposure to dust from repeated sanding of surfaces, mechanical abrasion or spray mist and actual concentration of crystalline silica in the formula. Crystalline silica is listed as Group 1 "carcinogenic to humans" by the International Agency for Research on Cancer (IARC), and Group 2 "reasonably anticipated to be a carcinogen" by the National Toxicology Program (NTP).

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: 81 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Water Fog

Unusual Fire And Explosion Hazards: Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Isolate from heat, electrical equipment, sparks and open flame.

Special Firefighting Procedures: Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Eliminate all ignition sources; use explosion-proof equipment. Place material in a container and dispose of according to local, provincial, state and federal regulations. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust.

Section 7 - Handling And Storage

Handling: Wash thoroughly after handling. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Use with adequate ventilation. Wash hands before eating.

Storage: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Keep away from heat, sparks, flame and sources of ignition. Keep container closed when not in use.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Mild
Appearance:	Liquid	Evaporation Rate:	Slower than Ether
Solubility in H2O:	Slight	Freeze Point:	N.D.
Specific Gravity:	1.422	PH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition, it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Mineral Spirits	>5000 mg/kg (Rat, Oral)	>1400 ppm (Rat, Inhalation, 4Hr)
Magnesium Silicate	N.E.	TCLo: 11 mg/m3 (Inhalation)
Calcium Metasilicate	N.E.	N.E.

Quartz (Crystalline Silica)	N.E.	N.E.
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	**International (IMDG)**	**Air (IATA)**
Proper Shippping Name:	Consumer Commodity	Paint	Paint
Hazard Class:	ORM-D	3	3
UN Number:	N.A.	UN1263	UN1263
Packing Group:	N.A.	III	III
Limited Quantity:	No	IMDG 34-08, 3.4.7	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	**CAS Number**
Limestone	1317-65-3
Iron Oxide	1309-37-1

Alkyd Resin	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Limestone	1317-65-3
Iron Oxide	1309-37-1
Alkyd Resin	PROPRIETARY

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: B2 D2A D2B

Section 16 - Other Information

NFPA Ratings:

Health: 2 Flammability: 3 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/l: 408

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : SAND 0002395
IDENTIFICATION NUMBER: 7771 402
DATE PRINTED : 07/05/00

PRODUCT USE/CLASS : PROFESSIONAL ENAMEL

SUPPLIER:
Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, Illinois
60061 USA

(847) 367-7700 Rust-Oleum Corp.
8:00 AM-4:30 PM/24-hr Emer.Assist

MANUFACTURER:
Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, Illinois
60061 USA

(847) 367-7700 Rust-Oleum Corp.
8:00 AM-4:30 PM/24-hr Emer.Assist

PREPARER: L.J.W., PHONE: 847-816-2445, PREPARE DATE: 06/28/00

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT % LESS THAN
01	Petroleum Distillates	64742-47-8	35.0 %
02	Stoddard Solvent	8052-41-3	15.0 %
03	Titanium Dioxide	13463-67-7	10.0 %
04	MIXED COBALT CARBOXYLATES	NOT AVAILABLE	1.0 %

EXPOSURE LIMITS

ITEM	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING	MEXICAN TLV-TWA	SKIN
01	N.E.	N.E.	N.E.	N.E.	N.E.	YES
02	100ppm	N.E.	100ppm	N.E.	100 PPM	NO
03	10 mg/m3	N.E.	15 mg/m3	N.E.	N.E.	NO
04	N.E.	N.E.	N.E.	N.E.	N.E.	NO

(See Section 16 for abbreviation legend)

SECTION 3 - HAZARDS IDENTIFICATION

*** EMERGENCY OVERVIEW ***: Causes eye irritation. Vapors irritating to eyes and respiratory tract. Combustible liquid and vapor. Harmful if inhaled. May effect the brain or nervous system causing

(Continued on Page 2)

SECTION 3 - HAZARDS IDENTIFICATION

dizziness, headache or nausea.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May cause skin irritation.

EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. May cause headaches and dizziness. High vapor concentrations are irritating to the eyes, nose, throat and lungs.

EFFECTS OF OVEREXPOSURE - INGESTION: Substance may be harmful if swallowed. Aspiration hazard if swallowed; can enter lungs and cause damage.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Contains a Cobalt compound. IARC lists Cobalt and Cobalt compounds as as possible human carcinogens (group 2B). However, there is inadequate evidence of the carcinogenicity of cobalt and cobalt compounds in humans and limited evidence in experimental animals.

PRIMARY ROUTE(S) OF ENTRY: INHALATION EYE CONTACT

SECTION 4 - FIRST AID MEASURES

FIRST AID - EYE CONTACT: Hold eyelids apart and flush with plenty of water for at lease 15 minutes. Get medical attention.

FIRST AID - SKIN CONTACT: Wash with soap and water. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: 102 F

LOWER EXPLOSIVE LIMIT: 0.6 %
UPPER EXPLOSIVE LIMIT: 6.5 %

AUTOIGNITION TEMPERATURE: ND

EXTINGUISHING MEDIA: DRY CHEMICAL FOAM WATER FOG

(Continued on Page 3)

SECTION 5 - FIRE FIGHTING MEASURES

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep containers tightly closed.

SPECIAL FIREFIGHTING PROCEDURES: Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Evacuate area and fight fire from a safe distance.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Wash thoroughly after handling. Wash hands before eating. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing vapor or mist. Avoid contact with eyes.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Keep away from heat, sparks, flame and sources of ignition. Keep container closed when not in use.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace

conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

SKIN PROTECTION: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

(Continued on Page 4)

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE	: 318 - 383 F	VAPOR DENSITY	: Is heavier than air
ODOR	: SOLVENT	ODOR THRESHOLD	: ND
APPEARANCE	: LIQUID	EVAPORATION RATE	: Is slower than Ether
SOLUBILITY IN H2O	: INSOLUBLE		
FREEZE POINT	: ND	SPECIFIC GRAVITY	: 0.9655
VAPOR PRESSURE	: ND	pH @ 0.0 %	: ND
PHYSICAL STATE	: LIQUID	VISCOSITY	: ND

COEFFICIENT OF WATER/OIL DISTRIBUTION: ND

(See Section 16 for abbreviation legend)

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION PRODUCTS: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition it emits acrid smoke and irritating fumes.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

SECTION 11 - TOXICOLOGICAL PROPERTIES

COMPONENT TOXICOLOGICAL INFORMATION:

CHEMICAL NAME	LD50	LC50
Petroleum Distillates	>5000mg/kg	No Information
Stoddard Solvent	4900mg/kg(rat)	N.E.
Titanium Dioxide	24000mg/kg Rats	6820mg/m3 Rats
MIXED COBALT CARBOXYLATES	1200-1600 MG/KGRAT	>5.0 MG/L RAT

(Continued on Page 5)

SECTION 11 - TOXICOLOGICAL PROPERTIES

CHEMICAL NAME	LD50	LC50

SECTION 12 - ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: Product is a mixture of listed components. According to our raw material suppliers, all components are listed on the TSCA inventory as required or meet the polymer exemption as defined in Section 5.5.2 of the Toxic Substances Control Act.

SECTION 13 - DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

SECTION 14 - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: PAINT

DOT TECHNICAL NAME:

DOT HAZARD CLASS: 3 HAZARD SUBCLASS:

DOT UN/NA NUMBER: UN1263 PACKING GROUP: III RESP. GUIDE PAGE: 127

SECTION 15 - REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: AS FOLLOWS -

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)

CERCLA - SARA HAZARD CATEGORY:
This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD CHRONIC HEALTH HAZARD FIRE HAZARD

(Continued on Page 6)

SECTION 15 - REGULATORY INFORMATION

SARA SECTION 313:
This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	WT/WT % IS LESS THAN
MIXED COBALT CARBOXYLATES	NOT AVAILABLE	1.0 %

U.S. STATE REGULATIONS: AS FOLLOWS -

NEW JERSEY RIGHT-TO-KNOW:
The following materials are non-hazardous, but are among the top five components in this product:

CHEMICAL NAME	CAS NUMBER
ALKYD RESIN SOLUTION	66071-01-0
ALKYD RESIN SOLUTION	66070-60-8

PENNSYLVANIA RIGHT-TO-KNOW:
The following non-hazardous ingredients are present in the product at greater than 3%:

CHEMICAL NAME	CAS NUMBER
ALKYD RESIN SOLUTION	66071-01-0
ALKYD RESIN SOLUTION	66070-60-8

CALIFORNIA PROPOSITION 65:
WARNING: The chemical(s) noted below and contained in this product, are known to the state of California to cause cancer, birth defects or other reproductive harm:

CHEMICAL NAME	CAS NUMBER

According to our raw material suppliers no Proposition 65 chemicals exist in this product above OSHA de minimus levels. All products comply with label provisions of Proposition 65.

INTERNATIONAL REGULATIONS: AS FOLLOWS -

CANADIAN WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for use of the 16 headings.

CANADIAN WHMIS CLASS: B3 D2B

SECTION 16 - OTHER INFORMATION

HMIS RATINGS - HEALTH: 2* FLAMMABILITY: 2 REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: 05/11/00

(Continued on Page 7)

SECTION 16 - OTHER INFORMATION

LEGEND: N.A. - Not Applicable, N.E. - Not Established,
N.D. - Not Determined

: No Information.

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.

260448 Part# 7776-830
RUSTO-SPRAY, FLAT BLACK #7776
5114000 RUST-OLEUM CORPORATION
Buyer: Bernard W. Aubuchon Jr.

M A T E R I A L S A F E T Y D A T A S H E E T

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : FLAT BLACK SPRAY PAINT
IDENTIFICATION NUMBER: 7776 830
DATE PRINTED : 11/28/01

PRODUCT USE/CLASS : AEROSOL/ALKYD

SUPPLIER:
Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, Illinois
60061 USA

(847) 367-7700 Rust-Oleum Corp.
8:00 AM-4:30 PM/24-hr Emer.Assist

MANUFACTURER:
Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, Illinois
60061 USA

(847) 367-7700 Rust-Oleum Corp.
8:00 AM-4:30 PM/24-hr Emer.Assist

PREPARER: MTM, PHONE: 847-816-2445, PREPARE DATE: 11/28/01

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT % LESS THAN
01	LIQUIFIED PETROLEUM GAS	68476-85-7	35.0 %
02	ACETONE	67-64-1	15.0 %
03	MAGNESIUM SILICATE HYDRATE-TALC	14807-96-6	15.0 %
04	TOLUENE	108-88-3	10.0 %
05	Stoddard Solvent	8052-41-3	10.0 %
06	XYLENE	1330-20-7	5.0 %
07	AROMATIC HYDROCARBON	64742-95-6	5.0 %
08	1,2,4-TRIMETHYLBENZENE	95-63-6	5.0 %
09	ETHYL BENZENE	100-41-4	5.0 %
10	ETHYLBENZENE	100-41-4	5.0 %
11	Carbon Black	1333-86-4	1.0 %

	EXPOSURE LIMITS					
	ACGIH		OSHA		MEXICAN	
ITEM	TLV-TWA	TLV-STEL	PEL-TWA	PEL-CEILING	TLV-TWA	SKIN
01	1000 PPM	N.E.	1000 PPM	N.E.	N.E.	NO
02	750 PPM	1000 PPM	750 PPM	N.E.	N.E.	NO
03	10mg/m3	N.E.	15mg/m3	N.E.	N.E.	NO
04	50 PPM	150 PPM	200 PPM	300 PPM	N.E.	YES
05	100ppm	N.E.	100ppm	N.E.	100 PPM	NO
06	100PPM	150PPM	100PPM	N.E.	100 PPM	YES

(Continued on Page 2)

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

	EXPOSURE LIMITS					
	ACGIH		OSHA		MEXICAN	
ITEM	TLV-TWA	TLV-STEL	PEL-TWA	PEL-CEILING	TLV-TWA	SKIN
07	N.E.	N.E.	N.E.	N.E.	N.E.	YES
08	25 PPM	N.E.	N.E.	N.E.	N.E.	NO
09	100 PPM	N.E.	100 PPM	N.E.	N.E.	NO
10	100 PPM	125 PPM	100 PPM	N.E.	N.E.	YES
11	3.5 mg/m3	N.E.	3.5 mg/m3	N.E.	3.5 mg/m3	NO

(See Section 16 for abbreviation legend)

SECTION 3 - HAZARDS IDENTIFICATION

*** EMERGENCY OVERVIEW ***: Harmful if inhaled. Harmful if swallowed. Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. Harmful if inhaled. May effect the brain or nervous system causing
dizziness, headache or nausea. Contents Under Pressure.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Substance may cause slight skin irritation. Prolonged or repeated contact may cause skin irritation.

EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing vapors or mists. High vapor concentrations are irritating to the eyes, nose, throat and lungs.

EFFECTS OF OVEREXPOSURE - INGESTION: Substance may be harmful if swallowed. Aspiration hazard if swallowed; can enter lungs and cause damage.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: May cause central nervous system disorder (e,g.,narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. Overexposure to toluene in laboratory animals has been associated with liver abnormalities, kidney, lung and spleen damage. Effects
in humans have included liver and cardiac abnormalities. Contains carbon black. Chronic inflammation, lung fibrosis, and lung tumors have been observed in some rats experimentally exposed
for long periods of time to excessive concentrations of carbon black and several insoluble fine dust particles. Tumors have not been observed in

(Continued on Page 3)

SECTION 3 - HAZARDS IDENTIFICATION

other animal species (i.e., mouse and hampster) under similar circumstances and study conditions. Epidemiological studies of North American workers show no evidence of clinically significant adverse health effects due to occupational exposure to carbon black. Carbon black is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC and is proposed to be listed as A4-
"not classified as a human carcinogen" by the American Conference of Govermental Industrial Hygienists. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration ofcarbon black in the formula.

PRIMARY ROUTE(S) OF ENTRY: SKIN ABSORPTION INHALATION EYE CONTACT

SECTION 4 - FIRST AID MEASURES

FIRST AID - EYE CONTACT: Hold eyelids apart and flush with plenty of water for at lease 15 minutes. Get medical attention.

FIRST AID - SKIN CONTACT: Wash with soap and water. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: -99 F

LOWER EXPLOSIVE LIMIT: 0.9 %
UPPER EXPLOSIVE LIMIT: 12.8 %

AUTOIGNITION TEMPERATURE: ND

EXTINGUISHING MEDIA: DRY CHEMICAL FOAM

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20 DEG. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective. Closed containers may explode when exposed to extreme heat due to buildup of steam. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. Closed containers may

(Continued on Page 4)

SECTION 5 - FIRE FIGHTING MEASURES

explode when exposed to extreme heat.

SPECIAL FIREFIGHTING PROCEDURES: Evacuate area and fight fire from a safe distance.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Evacuate the area, remove all sources of ignition and ventilate well. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Wash thoroughly after handling. Wash hands before eating. Use only in a well-ventilated area. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing vapor or mist.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Do not store above 120 degrees F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 degrees F.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace

conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide

(Continued on Page 5)

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

adequate protection.

SKIN PROTECTION: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE	: -34 - 383 F	VAPOR DENSITY	: Is heavier than air
ODOR	: SOLVENT	ODOR THRESHOLD	: ND
APPEARANCE	: LIQUID	EVAPORATION RATE	: Is faster than Ether
SOLUBILITY IN H2O	: SLIGHT		
FREEZE POINT	: ND	SPECIFIC GRAVITY	: 1.0478
VAPOR PRESSURE	: ND	pH @ 0.0 %	: ND
PHYSICAL STATE	: LIQUID	VISCOSITY	: ND

COEFFICIENT OF WATER/OIL DISTRIBUTION: ND

(See Section 16 for abbreviation legend)

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Avoid temperatures above 120 degrees F. Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION PRODUCTS: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition it emits acrid smoke and irritating fumes.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

(Continued on Page 6)

SECTION 11 - TOXICOLOGICAL PROPERTIES

COMPONENT TOXICOLOGICAL INFORMATION:

CHEMICAL NAME	LD50	LC50
LIQUIFIED PETROLEUM GAS	N.E.	N.E.
ACETONE	RAT 5800MG/KG	RAT 50100MG/M^3 8H
MAGNESIUM SILICATE HYDRATE-TALC	None	None
TOLUENE	RAT 5000MG/KG	MOUSE 5320PPM 8HR
Stoddard Solvent	4900mg/kg(rat)	N.E.
XYLENE	RAT 4300MG/KG	RAT 5000PPM 4HR
AROMATIC HYDROCARBON	4900mg/kg(rat)	N.E.
1,2,4-TRIMETHYLBENZENE	N.E.	RAT 18G/M^3 4HR
ETHYL BENZENE	No Information	No Information
ETHYLBENZENE	RAT 3500MG/KG	N.A.
Carbon Black	N.A.	N.A.

SECTION 12 - ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: Product is a mixture of listed components. According to our raw material suppliers, all components are listed on the TSCA inventory as required or meet the polymer exemption as defined in Section 5.5.2 of the Toxic Substances Control Act.

SECTION 13 - DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

SECTION 14 - TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: Aerosol

DOT TECHNICAL NAME:

DOT HAZARD CLASS: 2 HAZARD SUBCLASS: 1

DOT UN/NA NUMBER: UN1950 PACKING GROUP: RESP. GUIDE PAGE: 127

SECTION 15 - REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: AS FOLLOWS -

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR

(Continued on Page 7)

SECTION 15 - REGULATORY INFORMATION

1910.1200)

CERCLA - SARA HAZARD CATEGORY:
This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD CHRONIC HEALTH HAZARD FIRE HAZARD

SARA SECTION 313:
This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

---------- CHEMICAL NAME ----------	CAS NUMBER	WT/WT % IS LESS THAN
TOLUENE	108-88-3	10.0 %
XYLENE	1330-20-7	5.0 %
1,2,4-TRIMETHYLBENZENE	95-63-6	5.0 %
ETHYL BENZENE	100-41-4	5.0 %
ETHYLBENZENE	100-41-4	5.0 %

U.S. STATE REGULATIONS: AS FOLLOWS -

NEW JERSEY RIGHT-TO-KNOW:
The following materials are non-hazardous, but are among the top five components in this product:

---------- CHEMICAL NAME ----------	CAS NUMBER
ALKYD RESIN SOLUTION	66070-60-8

PENNSYLVANIA RIGHT-TO-KNOW:
The following non-hazardous ingredients are present in the product at greater than 3%:

---------- CHEMICAL NAME ----------	CAS NUMBER
ALKYD RESIN SOLUTION	66070-60-8

CALIFORNIA PROPOSITION 65:
WARNING: The chemical(s) noted below and contained in this product, are known to the state of California to cause cancer, birth defects or other reproductive harm:

---------- CHEMICAL NAME ----------	CAS NUMBER
TOLUENE	108-88-3

INTERNATIONAL REGULATIONS: AS FOLLOWS -

CANADIAN WHMIS: This MSDS has been prepared in compliance with Controlled Product Regulations except for use of the 16 headings.

CANADIAN WHMIS CLASS: A B5 D2A D2B

(Continued on Page 8)

SECTION 15 - REGULATORY INFORMATION

SECTION 16 - OTHER INFORMATION

HMIS RATINGS - HEALTH: 2* FLAMMABILITY: 4 REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: 06/28/00

LEGEND: N.A. - Not Applicable, N.E. - Not Established,
N.D. - Not Determined

: No Information.

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	Rust-Oleum Stops Rust Enamel Aerosol Top Coats	Revision Date:	12/03/2007
Identification Number:	7733830, 7740830, 7794830, 7721830, 7722830, 7723830, 7724830, 7727830, 7729830, 7731830, 7738830, 7747830, 7755830, 7762830, 7763830, 7765830, 7768830, 7770830, 7771830, 7775830, 7776830, 7783830, 7784830, 7786830, 7789830, 7790830, 7792830, 7796830, 7797830, 7798830, 7779830, 214085, 214086, 214087, 214084, 241239, 241238, 241237, 241235, 241236, 7728830, 7754830, 201855, 201856, 241234, 245896, 245897, 245898, 245899		
Product Use/Class:	Topcoats/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Acetone	67-64-1	35.0	500 PPM	750 PPM	750 PPM	N.E.
Liquefied Petroleum Gas	68476-86-8	35.0	1000 PPM	N.E.	1000 PPM	N.E.
Xylene	1330-20-7	25.0	100 PPM	150 PPM	100 PPM	N.E.
Toluene	108-88-3	25.0	50 PPM	150 PPM	200 PPM	300 PPM
Titanium Dioxide	13463-67-7	15.0	10 mg/m3	N.E.	10 mg/m3	N.E.
Magnesium Silicate	14807-96-6	15.0	10 mg/m3	N.E.	15 mg/m3	N.E.
Stoddard Solvents	8052-41-3	10.0	100 PPM	N.E.	500 PPM	N.E.
Aliphatic Hydrocarbon	64742-89-8	10.0	300 PPM	N.E.	300 PPM	N.E.
Propylene Carbonate	108-32-7	10.0	N.E.	N.E.	N.E.	N.E.
Ethylbenzene	100-41-4	10.0	100 PPM	125 PPM	100 PPM	N.E.
N-Butyl Acetate	123-86-4	10.0	150 PPM	200 PPM	150 PPM	N.E.
Aromatic Hydrocarbon	64742-95-6	5.0	N.E.	N.E.	N.E.	N.E.
Ethylene Glycol Monobutyl Ether	111-76-2	5.0	20 PPM	N.E.	50 PPM	N.E.
1,2,4-Trimethylbenzene	95-63-6	5.0	25 PPM	N.E.	N.E.	N.E.
Aromatic Solvent	64742-95-6	5.0	N.E.	N.E.	N.E.	N.E.
Pigment Violet 32	12225-08-0	5.0	N.E.	N.E.	N.E.	N.E.
Pigment Black 7	1333-86-4	5.0	3.5 mg/m3	N.E.	3.5 mg/m3	N.E.
Pigment Red 122	980-26-7	1.0	15mg/m3	N.E.	5mg/m3	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Extremely flammable liquid and

vapor. Harmful if swallowed.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: May be harmful if absorbed through skin. Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula.
IARC lists Ethylbenzene as a possible human carcinogen (group 2B). May cause central nervous system disorder (e,g.,narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. Overexposure to toluene in laboratory animals has been associated with liver abnormalities, kidney, lung and spleen damage. Effects in humans have included liver and cardiac abnormalities. Contains carbon black. Chronic inflammation, lung fibrosis, and lung tumors have been observed in some rats experimentally exposed for long periods of time to excessive concentrations of carbon black and several insoluble fine dust particles. Tumors have not been observed in other animal species (i.e., mouse and hampster) under similar circumstances and study conditions. Epidemiological studies of North American workers show no evidence of clinically significant adverse health effects due to occupational exposure to carbon black.
Carbon black is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC and is proposed to be listed as A4- "not classified as a human carcinogen" by the American Conference of Govermental Industrial Hygienists. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of carbon black in the formula.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Hold eyelids apart and flush with plenty of water for at least 15 minutes. Get medical attention.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F LOWER EXPLOSIVE LIMIT: 0.6 %

(Setaflash) UPPER EXPLOSIVE LIMIT : 36.0 %

Extinguishing Media: Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Perforation of the pressurized container may cause bursting of the can. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Wash hands before eating. Wash thoroughly after handling. Avoid breathing vapor or mist. Use only in a well-ventilated area. Follow all MSDS/label precautions even after container is emptied because it may retain product residues.

Storage: Contents under pressure. Do not expose to heat or store above 120 ° F. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Boiling Range:	-34 - 900 F	Vapor Density:	Heavier than air
Odor:	Solvent Like	Odor Threshold:	ND
Appearance:	Liquid	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight		
Freeze Point:	ND	Specific Gravity:	0.8380
Vapor Pressure:	ND	PH:	NE
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition, it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Product LD50: ND

Product LC50: ND

Chemical Name	LD50	LC50
Acetone	N.D.	N.D.
Liquefied Petroleum Gas	N.D.	N.D.
Xylene	4300, mg/kg (Oral Rat)	5000 ppm/4hr (Inhalation, Rat)
Toluene	636 mg/kg (Oral, Rat)	49 gm/M3 (Inhalation, Rat)
Titanium Dioxide	>7500 mg/kg (ORAL, RAT)	N.D.
Magnesium Silicate	N.D.	TCLo:11mg/m3 inh.
Stoddard Solvents	N.D.	N.D.
Aliphatic Hydrocarbon	N.D.	N.D.
Propylene Carbonate	5.0 g/kg (ORAL, RAT)	N.D.
Ethylbenzene	3500 mg/kg (ORAL, RAT)	N.D.
N-Butyl Acetate	13100 mg/kg (ORAL, RAT)	2000 PPM (INH 4 Hr, RAT)
Aromatic Hydrocarbon	N.D.	N.D.
Ethylene Glycol Monobutyl Ether	1519 mg/kg (ORAL, MOUSE)	700 PPM (INH 7 Hr, RAT)
1,2,4-Trimethylbenzene	N.D.	18000 mg/m3 (RAT, 4 HR)
Aromatic Solvent	4700 mg/kg (ORAL, RAT)	3670 mg/kg (INH, RAT)
Pigment Violet 32	>10000 mg/kg (ORAL, RAT)	N.D.
Pigment Black 7	>8000 mg/kg (ORAL, RAT)	N.D.
Pigment Red 122	N.D.	N.D.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Aerosol	Packing Group:	---
DOT Technical Name:	---	Hazard Subclass:	---
DOT Hazard Class:	2.1	Resp. Guide Page:	126
DOT UN/NA Number:	UN1950		

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Xylene	1330-20-7
Toluene	108-88-3
Ethylbenzene	100-41-4
Ethylene Glycol Monobutyl Ether	111-76-2
1,2,4-Trimethylbenzene	95-63-6

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None known

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Alkyd Resin	66070-60-8

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Alkyd Resin	66070-60-8
Alkyd Resin	66070-60-8
Modified Alkyd Resin	PROPRIETARY
Barium Sulfate	7727-43-7
Yellow Iron Oxide	51274-00-1

California Proposition 65:

WARNING! This product contains a chemical(s) known by the State of California to cause cancer.

WARNING! This product contains a chemical(s) known to the state of California to cause birth defects or other reproductive harm.

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5, D2A, D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Reactivity: 0 Personal Protection: X

VOLATILE ORGANIC COMPOUNDS, g/l: NA

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.

RUST-OLEUM CORPORATION -- 7794 CONSUMER TOPCOAT/BRUSH GOODS ALKYD RESIN-SEMI GLOSS ENL -- 8010-00F018466

========== Product Identification ==========

Product ID:7794 CONSUMER TOPCOAT/BRUSH GOODS ALKYD RESIN-SEMI GLOSS ENL
MSDS Date:02/05/1986
FSC:8010
NIIN:00F018466
MSDS Number: BKXYZ
=== Responsible Party ===
Company Name:RUST-OLEUM CORPORATION
Address:11 HAWTHORN PKY
City:VERNON HILLS
State:IL
ZIP:60061
Info Phone Num:(312) 367-7700
Emergency Phone Num:(312) 367-7700
CAGE:DO883
=== Contractor Identification ===
Company Name:RUST-OLEUM CORP
Address:11 HAWTHORN PARKWAY
Box:City:VERNON HILLS
State:IL
ZIP:60061-1583
Country:US
Phone:847-367-7700
CAGE:08882
Company Name:RUST-OLEUM CORPORATION
Address:11 HAWTHORNE PARKWAY
City:VERNON HILLS
State:IL
ZIP:60061-1583
Country:US
CAGE:DO883

========== Composition/Information on Ingredients ==========

Ingred Name:BENZIN, NAPHTHA, MINERAL SPIRITS, PETROLEUM NAPHTHA
CAS:8030-30-6
RTECS #:DE3030000
Fraction by Wt: 30-45%
Other REC Limits:STEL 400 PPM
OSHA PEL:500 PPM
ACGIH TLV:300 PPM

========== Hazards Identification ==========

Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:INHALATION: ANESTHETIC, RESPIRATORY TRACT IRRITATION, NERVOUS SYSTEM DEPRESSION, HEADACHE, DIZZINESS, STAGGERING GAIT, CONFUSION, UNCONSCIOUSNESS OR COMA. SKIN/EYES: IRRITATION.
Explanation of Carcinogenicity:NONE
Effects of Overexposure:INHALATION: SOLVENTS MAY CAUSE PERMANENT BRAIN & NERVOUS SYSTEM DAMAGE, ANESTHETIC, RESPIRATORY TRACT IRRITATION, NERVOUS SYSTEM DEPRESSION, HEADACHE, DIZZINESS, STAGGERING GAIT, CONFUSION, UNCONSCIOU SNESS OR COMA. SKIN/EYES: IRRITATION.

First Aid Measures

First Aid:EYES: FLUSH W/PLENTY OF WATER FOR AT LEAST 15 MINS. SKIN: WASH THOROUGHLY W/SOAP & WATER. INHALATION: REMOVE TO FRESH AIR. GIVE CPR OR OXYGEN IF NEEDED. OBTAIN MEDICAL ATTENTION IN ALL CASES.

Fire Fighting Measures

Flash Point:104F
Extinguishing Media:NFPA CLASS B EXTINGUISHERS (CO_2, DRY CHEMICAL, FOAM)
Fire Fighting Procedures:WATER SPRAY MAY BE INEFFECTIVE. IF WATER IS USED, FOG NOZZLES ARE PREFERABLE. FULL PROTECTIVE CLOTHING & SELF CONTAINED BREATHING APPARATUS.
Unusual Fire/Explosion Hazard:WATER SPRAY MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILD-UP, POSSIBLE AUTOIGNITION & EXPLOSION WHEN EXPOSED TO EXTREME HEAT.

Accidental Release Measures

Spill Release Procedures:REMOVE ALL SOURCES OF IGNITION, VENTILATE AREA & REMOVE WITH INERT ABSORBENT & NONSPARKING TOOLS.

Handling and Storage

Handling and Storage Precautions:DON'T STORE >120F. STORE LARGE QUANTITIES IN BUILDINGS DESIGNED & PROTECTED FOR STORAGE OF NFPA CLASS II COMBUSTIBLE (OR FLAMMABLE LIQUIDS).
Other Precautions:CONTAINERS SHOULD BE GROUNDED WHEN POURING. DON'T TAKE INTERNALLY. EMPTY CONTAINERS MAY BE HAZARDOUS. KEEP CONTAINERS TIGHTLY CLOSED. DON'T APPLY TO HOT SURFACES. AVOID CONTACT W/SKIN & EYES.

Exposure Controls/Personal Protection

Respiratory Protection:USE NIOSH APPROVED MECHANICAL FILTER RESPIRATOR TO REMOVE SOLID AIRBORNE PARTICLES OF OVERSPRAY DURING SPRAY APPLICATION. IN CONFINED AREAS: USE NIOSH APPROVED AIRLINE TYPE RESPIRATOR OR HOODS.
Ventilation:GENERAL DILUTION OR LOCAL EXHAUST IN VOLUME & PATTERN TO KEEP AIR
Evaporation Rate & Reference:SLOWER THAN ETHER
Percent Volatiles by Volume:54-63%

Stability and Reactivity Data

Stability Indicator/Materials to Avoid:YES
STRONG OXIDIZING AGENTS
Stability Condition to Avoid:OPEN FLAME, TEMPERATURES >120F, & OTHER SOURCES OF IGNITION
Hazardous Decomposition Products:CO, CO_2

Disposal Considerations

Waste Disposal Methods:DISPOSE OF IN ACCORDANCE W/LOCAL, STATE, & FEDERAL REGULATIONS. DON'T INCINERATE OR PUNCTURE CONTAINERS.

Disclaimer (provided with this information by the compiling agencies):

This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever, expressly or implied, warrants this information to be accurate and disclaims all liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

1. Identification

Product Name: IC LSPR 12PK WHITE ATHLTC FIELD STRIPING

Revision Date: 11/12/2012

Identification Number: 206043

Product Use/Class: Striping Paint/Aerosol

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Preparer: Regulatory Department

2. Hazard Identification

EMERGENCY OVERVIEW: Harmful if swallowed. Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Contents Under Pressure.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May be absorbed through the skin in harmful amounts. Substance may cause slight skin irritation. Prolonged or repeated contact may cause skin irritation.

EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. High vapor concentrations are irritating to the eyes, nose, throat and lungs.

EFFECTS OF OVEREXPOSURE - INGESTION: Substance may be harmful if swallowed. Aspiration hazard if swallowed; can enter lungs and cause damage.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

3. Composition/Information On Ingredients

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Liquefied Petroleum Gas	68476-86-8	20.0	N.E.	N.E.	N.E.	N.E.
Aliphatic Hydrocarbon	64742-89-8	15.0	100 ppm	N.E.	100 ppm	N.E.
Limestone	1317-65-3	15.0	10 mg/m3 [Total Dust]	N.E.	5 mg/m3 [Respirable]	N.E.
Titanium Dioxide	13463-67-7	15.0	10 mg/m3	N.E.	15 mg/m3 [Total Dust]	N.E.

Toluene	108-88-3	10.0	20 ppm	N.E.	200 ppm	300 ppm
Acetone	67-64-1	10.0	500 ppm	750 ppm	1000 ppm	N.E.
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	5.0	200 mg/m3	N.E.	N.E.	N.E.
Xylene	1330-20-7	5.0	100 ppm	150 ppm	100 ppm	N.E.
Ethylbenzene	100-41-4	1.0	20 ppm	125 ppm	100 ppm	N.E.
Ethylene Glycol Monobutyl Ether	111-76-2	1.0	20 ppm	N.E.	50 ppm	N.E.
Amorphous Silica	7631-86-9	1.0	N.E.	N.E.	0.8 mg/m3	N.E.

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

5. Fire-fighting Measures

Flash Point, °F -156 (Setaflash)

EXTINGUISHING MEDIA: Alcohol Foam, Carbon Dioxide, Dry Chemical, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can.

SPECIAL FIREFIGHTING PROCEDURES: Evacuate area and fight fire from a safe distance.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Use only in a well-ventilated area. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing vapor or mist.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F.

8. Exposure Controls/Personal Protection

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

SKIN PROTECTION: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking.

9. Physical and Chemical Properties

Vapor Density	Heavier than Air	**Odor:**	SOLVENT
Appearance:	Aerosolized Mist	**Evaporation Rate:**	Faster than Ether
Solubility in Water:	Slight	**Freeze Point:**	ND
Specific Gravity:	0.936	**pH:**	ND
Physical State:	Liquid		

(See section 16 for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological Information

Chemical Name	LD50	LC50
Liquefied Petroleum Gas	N.E.	N.E.
Aliphatic Hydrocarbon	>5000 mg/kg (Rat, Oral)	N.E.
Limestone	>5000 mg/kg (Rat, Oral)	N.E.
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.
Toluene	636 mg/kg (Rat, Oral)	>26700 ppm (Rat, Inhalation, 1Hr)
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Naphtha, Petroleum, Hydrotreated Light	N.E.	N.E.
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.

Ethylene Glycol Monobutyl Ether	1519 mg/kg (Mouse, Oral)	700 ppm (Rat, Inhalation, 7Hr)
Amorphous Silica	>7500 mg/kg (Rat)	>250 mg/m3 (Rat, 6Hr)

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter waterways, wastewater. soil, storm drains or sewer systems.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	No	No

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA ‘ Hazard Categories ’ promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

SARA SECTION 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Toluene	108-88-3
Xylene	1330-20-7
Ethylbenzene	100-41-4
Ethylene Glycol Monobutyl Ether	111-76-2

TOXIC SUBSTANCES CONTROL ACT:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b)components exist in this product.

International Regulations:

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

Canadian WHMIS Class: AB5 D2A

16. Other Information

HMIS Ratings:

Health: 2* **Flammability:** 4 **Physical Hazard:** 0 **Personal Protection:** X

NFPA Ratings:

Health: 2 **Flammability:** 4 **Instability** 0

Volatile Organic Compounds, g/L: 529

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

RUST-OLEUM CORPORATION

1. Identification

Product Name: ROHPER LSPR 6PK ENAMEL ANODIZ BRNZ 15OZ

Revision Date: 9/18/2013

Product Number: 209565

Product Use/Class: Topcoat/Aerosol

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Prepared by: Regulatory Department

2. Hazard Identification

EMERGENCY OVERVIEW: Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Contents Under Pressure. May cause eye, skin, or respiratory tract irritation. KEEP OUT OF REACH OF CHILDREN. Harmful if inhaledHarmful if swallowed. Causes eye irritation. Use ventilation necessary to keep exposures below recommended exposure limits, if any. Vapor Harmful. Causes Eye, Skin, Nose, and Throat Irritation.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes Serious Eye Irritation

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May cause skin irritation. Allergic reactions are possible.

EFFECTS OF OVEREXPOSURE - INHALATION: High gas, vapor, mist or dust concentrations may be harmful if inhaled. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains carbon black. Chronic inflammation, lung fibrosis, and lung tumors have been observed in some rats experimentally exposed for long periods of time to excessive concentrations of carbon black and several insoluble fine dust particles. Tumors have not been observed in other animal species (i.e., mouse and hamster) under similar circumstances and study conditions. Epidemiological studies of North American workers show no evidence of clinically significant adverse health effects due to occupational exposure to carbon black.

Carbon black is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC and is proposed to be listed as A4- "not classified as a human carcinogen" by the American Conference of Governmental Industrial Hygienists. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of carbon black in the formula. Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. No significant exposure to Titanium Dioxide is thought to occur during the use of products in which Titanium Dioxide is bound to other materials, such as in paints during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula. (Ref: IARC Monograph, Vol. 93, 2010)May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

3. Composition/Information On Ingredients

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Acetone	67-64-1	30.0	500 ppm	750 ppm	1000 ppm	N.E.
Liquefied Petroleum Gas	68476-86-8	25.0	N.E.	N.E.	N.E.	N.E.
Alkyd Resin	PROPRIETARY	15.0	N.E.	N.E.	N.E.	N.E.
n-Butyl Acetate	123-86-4	10.0	150 ppm	200 ppm	150 ppm	N.E.
Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
Talc	14807-96-6	10.0	2 mg/m3	N.E.	0.1 mg/m3 [Respirable]	N.E.
Ethylbenzene	100-41-4	5.0	20 ppm	125 ppm	100 ppm	N.E.
Titanium Dioxide	13463-67-7	5.0	10 mg/m3	N.E.	15 mg/m3 [Total Dust]	N.E.
Propylene Glycol Monobutyl Ether	5131-66-8	5.0	N.E.	N.E.	N.E.	N.E.
Aromatic Petroleum Distillates	64742-94-5	5.0	N.E.	N.E.	N.E.	N.E.
Carbon Black	1333-86-4	1.0	3 mg/m3	N.E.	3.5 mg/m3	N.E.
Solvent Naptha, Light Aromatic	64742-95-6	1.0	N.E.	N.E.	N.E.	N.E.

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: If swallowed, get medical attention.

5. Fire-fighting Measures

Flash Point, °F -156 (Setaflash)

Extinguishing Media: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR!Water spray may be ineffective. Closed containers may explode when exposed to extreme heat due to buildup of steam. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. No unusual fire or explosion hazards noted. Keep containers tightly closed.

SPECIAL FIREFIGHTING PROCEDURES: Full protective equipment including self-contained breathing apparatus should be used. Evacuate area and fight fire from a safe distance. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and launder before reuse. Use only with adequate ventilation. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Avoid contact with eyes, skin and clothing.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials. Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep away from heat, sparks, flame and sources of ignition. Avoid excess heat.

8. Exposure Controls/Personal Protection

ENGINEERING CONTROLS: Use explosion-proof ventilation equipment. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use gloves to prevent prolonged skin contact. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

9. Physical and Chemical Properties

Vapor Density	Heavier than Air	**Odor:**	Solvent Like
Appearance:	Aerosolized Mist	**Evaporation Rate:**	Faster than Ether
Solubility in Water:	Miscible	**Freeze Point:**	N.D.
Specific Gravity:	0.809	**pH:**	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120 ° F. Avoid contact with strong acid and strong bases. Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological Information

Chemical Name	LD50	LC50
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Liquefied Petroleum Gas	N.E.	N.E.
Alkyd Resin	N.E.	N.E.
n-Butyl Acetate	13100 mg/kg (Rat, Oral)	2000 ppm (Rat, Inhalation, 4 Hr)
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)

Talc	N.E.	TCLo: 11 mg/m3 (Inhalation)
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.
Propylene Glycol Monobutyl Ether	2200 mg/kg (Rat, Oral)	N.E.
Aromatic Petroleum Distillates	4900 mg/kg (Rat, Oral)	N.E.
Carbon Black	>8000 mg/kg (Rat, Oral)	N.E.
Solvent Naptha, Light Aromatic	4700 mg/kg (Rat, Oral)	3670 mg/kg (Rat, Inhalation)

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter waterways, wastewater. soil, storm drains or sewer systems.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)	TDG (Canada)
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Xylene	1330-20-7
Ethylbenzene	100-41-4
Aromatic Petroleum Distillates	64742-94-5
Toluene	108-88-3

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b) components exist in this product.

International Regulations:

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

Canadian WHMIS Class: AB5 D2A

16. Other Information

HMIS Ratings:

Health:	2*	**Flammability:**	4	**Physical Hazard:**	0	**Personal Protection:**	X

NFPA Ratings:

Health:	2	**Flammability:**	4	**Instability**	0

VOLATILE ORGANIC COMPOUNDS, g/L: 528

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	ROAUTO SSPR 4PK AUTO RUSTY METAL PRIMER	Revision Date:	06/20/2006
Identification Number:	209620		
Product Use/Class:	Primer/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Liquefied Petroleum Gas	68476-86-8	25.0	1000 PPM	N.E.	1000 PPM	N.E.
Acetone	67-64-1	25.0	500 PPM	750 PPM	750 PPM	N.E.
Xylene	1330-20-7	10.0	100 PPM	150 PPM	100 PPM	N.E.
Magnesium Silicate	14807-96-6	10.0	10 mg/m3	N.E.	15 mg/m3	N.E.
Stoddard Solvents	8052-41-3	10.0	100 PPM	N.E.	500 PPM	N.E.
N-Butyl Acetate	123-86-4	5.0	150 PPM	200 PPM	150 PPM	N.E.
Ethylbenzene	100-41-4	5.0	100 PPM	125 PPM	100 PPM	N.E.
Zinc Phosphate	7779-90-0	5.0	N.E.	N.E.	N.E.	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Extremely flammable liquid and vapor. Contents Under Pressure. Harmful if swallowed.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). May cause central nervous system disorder (e,g.,narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged

occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Hold eyelids apart and flush with plenty of water for at least 15 minutes. Get medical attention.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F (Setaflash)

Lower Explosive Limit: 0.7 %
Upper Explosive Limit : 12.8 %

Extinguishing Media: Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Use only in a well-ventilated area. Avoid breathing vapor or mist. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Wash thoroughly after handling. Wash hands before eating.

Storage: Contents under pressure. Do not expose to heat or store above 120 ° F. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use explosion-proof ventilation equipment.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Boiling Range:	69 - 399 F	Vapor Density:	Heavier than Air
Odor:	Solvent Like	Odor Threshold:	ND
Appearance:	Liquid	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight		
Freeze Point:	N.D.	Specific Gravity:	0.867
Vapor Pressure:	ND	PH:	N.E.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Product LD50: N.D.

Product LC50: N.D.

Chemical Name	LD50	LC50
Liquefied Petroleum Gas	N.D.	N.D.
Acetone	N.D.	N.D.
Xylene	N.D.	N.D.
Magnesium Silicate	N.D.	TCLo:11mg/m3 inh.
Stoddard Solvents	N.D.	N.D.
N-Butyl Acetate	13100 mg/kg (ORAL, RAT)	2000 PPM (INH 4 Hr, RAT)
Ethylbenzene	3500 mg/kg (ORAL, RAT)	N.D.
Zinc Phosphate	N.D.	N.D.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Aerosol	Packing Group:	---
DOT Technical Name:	---	Hazard Subclass:	---
DOT Hazard Class:	2.1	Resp. Guide Page:	126
DOT UN/NA Number:	UN1950		

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA `Hazard Categories' promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Xylene	1330-20-7
Ethylbenzene	100-41-4
Zinc Phosphate	7779-90-0

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Modified Alkyd Resin	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Modified Alkyd Resin	PROPRIETARY
Calcium Carbonate	1317-65-3
Iron Oxide	1309-37-1
ACRYLIC RESIN	NOT AVAILABLE

California Proposition 65:

WARNING! This product contains a chemical(s) known by the State of California to cause cancer.

WARNING! This product contains a chemical(s) known to the state of California to cause birth defects or other reproductive harm.

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Reactivity: 0 Personal Protection: X

VOLATILE ORGANIC COMPOUNDS, g/l: 451

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The information contained on this MSDS has been checked and should be accurate. However, it is the

responsibility of the user to comply with all Federal, State, and Local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

1. Identification

Product Name: ROHPER LSPR 6PK FARM FORD BLUE **Revision Date:** 11/12/2012

Identification Number: 209718

Product Use/Class: Topcoat/Aerosol

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Preparer: Regulatory Department

2. Hazard Identification

EMERGENCY OVERVIEW: Harmful if swallowed. Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Contents Under Pressure.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Substance may cause slight skin irritation. Prolonged or repeated contact may cause skin irritation.

EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. High vapor concentrations are irritating to the eyes, nose, throat and lungs.

EFFECTS OF OVEREXPOSURE - INGESTION: Substance may be harmful if swallowed. Aspiration hazard if swallowed; can enter lungs and cause damage.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula. Overexposure to methyl ethyl ketone in laboratory animals has been associated with liver abnormalities, kidney and lung damage. Fetotoxic/embryotoxic effects from inhalation have been seen in rats exposed to >1000ppm during gestation. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

3. Composition/Information On Ingredients

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Liquefied Petroleum Gas	68476-86-8	25.0	N.E.	N.E.	N.E.	N.E.
Alkyd Resin	Proprietary	20.0	N.E.	N.E.	N.E.	N.E.
Acetone	67-64-1	20.0	500 ppm	750 ppm	1000 ppm	N.E.
n-Butyl Acetate	123-86-4	15.0	150 ppm	200 ppm	150 ppm	N.E.

Methyl Ethyl Ketone	78-93-3	10.0	200 ppm	300 ppm	200 ppm	N.E.
Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
Titanium Dioxide	13463-67-7	5.0	10 mg/m3	N.E.	15 mg/m3 [Total Dust]	N.E.
Ethylbenzene	100-41-4	5.0	20 ppm	125 ppm	100 ppm	N.E.
Barium Sulfate	7727-43-7	5.0	10 mg/m3	N.E.	15 mg/m3	N.E.
Propylene Glycol Monobutyl Ether	5131-66-8	5.0	N.E.	N.E.	N.E.	N.E.
Aromatic Petroleum Distillates	64742-94-5	5.0	N.E.	N.E.	N.E.	N.E.
Solvent Naptha, Light Aromatic	64742-95-6	1.0	N.E.	N.E.	N.E.	N.E.

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

5. Fire-fighting Measures

Flash Point, °F -156 (Setaflash)

EXTINGUISHING MEDIA: Alcohol Foam, Carbon Dioxide, Dry Chemical, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can.

SPECIAL FIREFIGHTING PROCEDURES: Evacuate area and fight fire from a safe distance.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Use only in a well-ventilated area. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing vapor or mist.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F.

8. Exposure Controls/Personal Protection

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

SKIN PROTECTION: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking.

9. Physical and Chemical Properties

Vapor Density	Heavier than Air	**Odor:**	Solvent Like
Appearance:	Aerosolized Mist	**Evaporation Rate:**	Faster than Ether
Solubility in Water:	Slight	**Freeze Point:**	N.D.
Specific Gravity:	0.795	**pH:**	N.E.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological Information

Chemical Name	LD50	LC50
Liquefied Petroleum Gas	N.E.	N.E.
Alkyd Resin	N.E.	N.E.
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
n-Butyl Acetate	13100 mg/kg (Rat, Oral)	2000 ppm (Rat, Inhalation, 4 Hr)
Methyl Ethyl Ketone	N.E.	N.E.
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.
Barium Sulfate	N.E.	N.E.

Propylene Glycol Monobutyl Ether	2200 mg/kg (Rat, Oral)	N.E.
Aromatic Petroleum Distillates	4900 mg/kg (Rat, Oral)	N.E.
Solvent Naptha, Light Aromatic	4700 mg/kg (Rat, Oral)	3670 mg/kg (Rat, Inhalation)

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter waterways, wastewater. soil, storm drains or sewer systems.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	No	No

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA ‘ Hazard Categories ’ promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

SARA SECTION 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Methyl Ethyl Ketone	78-93-3
Xylene	1330-20-7
Ethylbenzene	100-41-4
Aromatic Petroleum Distillates	64742-94-5

TOXIC SUBSTANCES CONTROL ACT:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b)components exist in this product.

International Regulations:

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

Canadian WHMIS Class: AB5 D2A

16. Other Information

HMIS Ratings:

Health: 2* **Flammability:** 4 **Physical Hazard:** 0 **Personal Protection:** X

NFPA Ratings:

Health: 2 **Flammability:** 4 **Instability** 0

Volatile Organic Compounds, g/L: 553

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	STRUST SSPR 6PK MULTI-TEX AGED IRON	Revision Date:	05/05/2011
Identification Number:	223525		
Product Use/Class:	Textured Finish/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Liquefied Petroleum Gas	68476-86-8	25.0	N.E.	N.E.	N.E.	N.E.
Acetone	67-64-1	25.0	500 ppm	750 ppm	1000 ppm	N.E.
Alkyd Resin	PROPRIETARY	20.0	N.E.	N.E.	N.E.	N.E.
n-Butyl Acetate	123-86-4	10.0	150 ppm	200 ppm	150 ppm	N.E.
Magnesium Silicate	14807-96-6	10.0	2 mg/m3	N.E.	0.1 mg/m3 (Respirable)	N.E.
Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
Toluene	108-88-3	5.0	20 ppm	N.E.	200 ppm	300 ppm
Ethylbenzene	100-41-4	5.0	100 ppm	125 ppm	100 ppm	N.E.
Polypropylene	9003-07-0	5.0	N.E.	N.E.	5 mg/m3	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Harmful if swallowed. Extremely flammable liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue,

mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Water Fog

Unusual Fire And Explosion Hazards: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Perforation of the pressurized container may cause bursting of the can. Isolate from heat, electrical equipment, sparks and open flame. Keep containers tightly closed. Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Use only in a well-ventilated area. Avoid breathing vapor or mist. Wash thoroughly after handling. Wash hands before eating.

Storage: Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use explosion-proof ventilation equipment. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Aerosolized Mist	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight	Freeze Point:	N.D.
Specific Gravity:	0.804	pH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50

Liquefied Petroleum Gas	N.E.	N.E.
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Alkyd Resin	N.E.	N.E.
n-Butyl Acetate	13100 mg/kg (Rat, Oral)	2000 ppm (Rat, Inhalation, 4 Hr)
Magnesium Silicate	N.E.	TCLo: 11 mg/m3 (Inhalation)
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Toluene	636 mg/kg (Rat, Oral)	>26700 ppm (Rat, Inhalation, 1Hr)
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.
Polypropylene	N.E.	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	**International (IMDG)**	**Air (IATA)**
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	Yes	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD, PRESSURIZED GAS HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	**CAS Number**
Xylene	1330-20-7
Toluene	108-88-3
Ethylbenzene	100-41-4

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

None

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Polyethylene	9002-88-4

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Reactivity: 0 Personal Protection: X

NFPA Ratings:

Health: 2 Flammability: 4 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 487

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	RO 1-GL 2PK SATIN PORCH&FLOOR PURE WHITE	Revision Date:	10/22/2010
Identification Number:	244858		
Product Use/Class:	Topcoat/ Waterbased		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Titanium Dioxide	13463-67-7	20.0	10 mg/m3	N.E.	15 mg/m3	N.E.
Ester Alcohol	25265-77-4	5.0	N.E.	N.E.	N.E.	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Use ventilation necessary to keep exposures below recommended exposure limits, if any.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: Low hazard for usual industrial handling or commercial handling by trained personnel.

Effects Of Overexposure - Ingestion: Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation.

First Aid - Ingestion: Swallowing less than an ounce will not cause significant harm. For larger amounts, do not induce vomiting, but give one or two glasses of water to drink and get medical attention.

Section 5 - Fire Fighting Measures

Flash Point: 212 F (SCC)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Water Fog

Unusual Fire And Explosion Hazards: FLASH POINT IS TESTED TO BE GREATER THAN 200 DEGREES F.

Special Firefighting Procedures: Water may be used to cool closed containers to prevent buildup of steam.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Wash thoroughly after handling. Avoid contact with eyes. Wash hands before eating.

Storage: Keep container closed when not in use. Keep from freezing.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use gloves to prevent prolonged skin contact.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Liquid	Evaporation Rate:	Slower than Ether
Solubility in H2O:	Soluble	Freeze Point:	N.D.
Specific Gravity:	1.260	PH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid contact with strong acid and strong bases.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition, it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Titanium Dioxide	N.E.	N.E.
Ester Alcohol	6517 mg/kg (Rat, Oral)	>3.55 mg/L (Rat, Inhalation, 6Hr)

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shippping Name:	Not Regulated	Not Regulated	Not Regulated
Hazard Class:	N.A.	N.A.	N.A.
UN Number:	N.A.	N.A.	N.A.
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	No	No

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

CHRONIC HEALTH HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Deionized Water	7732-18-5
Acrylic Resin	PROPRIETARY
Potassium Aluminosilicate	37244-96-5
Acrylic Hybrid Emulsion	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Deionized Water	7732-18-5
Acrylic Resin	PROPRIETARY
Potassium Aluminosilicate	37244-96-5
Acrylic Hybrid Emulsion	PROPRIETARY
Mica	12001-26-2

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: D2A D2B

Section 16 - Other Information

NFPA Ratings:

Health: 2 Flammability: 1 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/l: 84

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	UNVRSL +SSPR 6PK SATIN WHITE	Revision Date:	10/05/2011
Identification Number:	245210		
Product Use/Class:	Topcoat/Aerosols		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Liquefied Petroleum Gas	68476-86-8	30.0	N.E.	N.E.	N.E.	N.E.
Acetone	67-64-1	20.0	500 ppm	750 ppm	1000 ppm	N.E.
n-Butyl Acetate	123-86-4	15.0	150 ppm	200 ppm	150 ppm	N.E.
Titanium Dioxide	13463-67-7	15.0	10 mg/m3	N.E.	15 mg/m3 (Total Dust)	N.E.
Medium Oil Alkyd	PROPRIETARY	10.0	N.E.	N.E.	N.E.	N.E.
Propylene Glycol Monobutyl Ether	5131-66-8	5.0	N.E.	N.E.	N.E.	N.E.
Solvent Naptha, Light Aromatic	64742-95-6	5.0	N.E.	N.E.	N.E.	N.E.
1,2,4-Trimethylbenzene	95-63-6	5.0	25 ppm	N.E.	N.E.	N.E.
Calcined Aluminum Silicate	1332-58-7	5.0	2 mg/m3	N.E.	5 mg/m3 (Respirable)	N.E.
Xylene	1330-20-7	1.0	100 ppm	150 ppm	100 ppm	N.E.
Ethylbenzene	100-41-4	1.0	100 ppm	125 ppm	100 ppm	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Harmful if swallowed. Extremely flammable liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing vapors or mists.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula.
May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

Unusual Fire And Explosion Hazards: Perforation of the pressurized container may cause bursting of the can. Isolate from heat, electrical equipment, sparks and open flame. Keep containers tightly closed. Vapors can travel to a source of ignition and flash back. Vapors may form explosive mixtures with air. Closed containers may explode when exposed to extreme heat. FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Wash hands before eating. Use only in a well-ventilated area. Avoid breathing vapor or mist. Wash thoroughly after handling. Follow all MSDS/label precautions even after container is emptied because it may retain product residues.

Storage: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Aerosolized Mist	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight	Freeze Point:	N.D.
Specific Gravity:	0.841	pH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition, it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Liquefied Petroleum Gas	N.E.	N.E.
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
n-Butyl Acetate	13100 mg/kg (Rat, Oral)	2000 ppm (Rat, Inhalation, 4 Hr)
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.
Medium Oil Alkyd	N.E.	N.E.
Propylene Glycol Monobutyl Ether	2200 mg/kg (Rat, Oral)	N.E.
Solvent Naptha, Light Aromatic	4700 mg/kg (Rat, Oral)	3670 mg/kg (Rat, Inhalation)
1,2,4-Trimethylbenzene	N.E.	18000 mg/m3 (Rat, 4Hr)
Calcined Aluminum Silicate	5000 mg/kg (Rat, Oral)	N.E.
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	Yes	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD, PRESSURIZED GAS HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
1,2,4-Trimethylbenzene	95-63-6

Xylene	1330-20-7

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Alkyd Resin	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Alkyd Resin	PROPRIETARY

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Physical Hazard: 0 Personal Protection: X

NFPA Ratings:

Health: 2 Flammability: 4 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 515

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from

their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

1. Identification

Product Name: UNVRSL +SSPR 6PK METALC PURE GOLD **Revision Date:** 10/21/2014

Product Number: 245221

Product Use/Class: Metallic Finish / Aerosol

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Prepared by: Regulatory Department

2. Hazard Identification

EMERGENCY OVERVIEW: Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Contents Under Pressure. May cause eye, skin, or respiratory tract irritation. KEEP OUT OF REACH OF CHILDREN. Harmful if inhaled. Harmful if swallowed. Causes eye irritation. Use ventilation necessary to keep exposures below recommended exposure limits, if any. Vapor Harmful. Causes Eye, Skin, Nose, and Throat Irritation.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes Serious Eye Irritation

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May cause skin irritation. Allergic reactions are possible.

EFFECTS OF OVEREXPOSURE - INHALATION: High gas, vapor, mist or dust concentrations may be harmful if inhaled. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

3. Composition/Information On Ingredients

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Liquefied Petroleum Gas	68476-86-8	35.0	N.E.	N.E.	N.E.	N.E.
Acetone	67-64-1	30.0	500 ppm	750 ppm	1000 ppm	N.E.
Xylene (mixed isomers)	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
n-Butyl Acetate	123-86-4	10.0	150 ppm	200 ppm	150 ppm	N.E.
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	5.0	200 mg/m3	N.E.	N.E.	N.E.
Ethylbenzene	100-41-4	5.0	20 ppm	125 ppm	100 ppm	N.E.
Propylene Glycol Monobutyl Ether	5131-66-8	5.0	N.E.	N.E.	N.E.	N.E.

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention. If swallowed, get medical attention.

5. Fire-fighting Measures

Flash Point, °F -156 (Setaflash)

Extinguishing Media: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR!Water spray may be ineffective. Closed containers may explode when exposed to extreme heat due to buildup of steam. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. No unusual fire or explosion hazards noted. Keep containers tightly closed.

SPECIAL FIREFIGHTING PROCEDURES: Full protective equipment including self-contained breathing apparatus should be used. Evacuate area and fight fire from a safe distance. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and launder before reuse. Use only with adequate ventilation. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Avoid contact with eyes, skin and clothing.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials. Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep away from heat, sparks, flame and sources of ignition. Avoid excess heat.

8. Exposure Controls/Personal Protection

ENGINEERING CONTROLS: Use explosion-proof ventilation equipment. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use gloves to prevent prolonged skin contact. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

9. Physical and Chemical Properties

Vapor Density	Heavier than Air	**Odor:**	Solvent Like
Appearance:	Aerosolized Mist	**Evaporation Rate:**	Faster than Ether
Solubility in Water:	Slight	**Freeze Point:**	N.D.
Specific Gravity:	0.729	**pH:**	N.E.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120 ° F. Avoid contact with strong acid and strong bases. Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological Information

Chemical Name	LD50	LC50
Liquefied Petroleum Gas	N.E.	N.E.
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Xylene (mixed isomers)	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
n-Butyl Acetate	13100 mg/kg (Rat, Oral)	2000 ppm (Rat, Inhalation, 4Hr)
Naphtha, Petroleum, Hydrotreated Light	N.E.	N.E.
Ethylbenzene	3500 mg/kg (Rat, Oral)	17.2 mg/kg (Inhalation, Rat, 4 hr)
Propylene Glycol Monobutyl Ether	2200 mg/kg (Rat, Oral)	N.E.

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state, and federal regulations and ordinances. Do not allow to enter waterways, wastewater, soil, storm drains or sewer systems.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)	TDG (Canada)
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Xylene (mixed isomers)	1330-20-7
Ethylbenzene	100-41-4
Aluminum Flake	7429-90-5
meta-Xylene	108-38-3
para-Xylene	106-42-3
ortho-Xylene	95-47-6

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b) components exist in this product.

International Regulations:

CANADIAN WHMIS:

This SDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

Canadian WHMIS Class: AB5 D2A

16. Other Information

HMIS Ratings:

Health:	2*	**Flammability:**	4	**Physical Hazard:**	0	**Personal Protection:**	X

NFPA Ratings:

Health:	2	**Flammability:**	4	**Instability**	0

VOLATILE ORGANIC COMPOUNDS, g/L: 553

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700

Rust-Oleum Corp.
www.rustoleum.com

1. Identification

Product Name: PTOUCH 2X +SSPR 6PK SEMI-GLOSS WHITE

Revision Date: 6/12/2012

Identification Number: 249060

Product Use/Class: Topcoat/Aerosol

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Preparer: Regulatory Department

2. Hazard Identification

EMERGENCY OVERVIEW: Harmful if swallowed. Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Contents Under Pressure.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Substance may cause slight skin irritation. Prolonged or repeated contact may cause skin irritation.

EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing vapors or mists. High vapor concentrations are irritating to the eyes, nose, throat and lungs.

EFFECTS OF OVEREXPOSURE - INGESTION: Substance may be harmful if swallowed. Aspiration hazard if swallowed; can enter lungs and cause damage.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

3. Composition/Information On Ingredients

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Liquefied Petroleum Gas	68476-86-8	30.0	N.E.	N.E.	N.E.	N.E.
Acetone	67-64-1	25.0	500 ppm	750 ppm	1000 ppm	N.E.
Titanium Dioxide	13463-67-7	15.0	10 mg/m3	N.E.	15 mg/m3 [Total Dust]	N.E.
Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	10.0	200 mg/m3	N.E.	N.E.	N.E.

Aliphatic Hydrocarbon	64742-89-8	5.0	100 ppm	N.E.	100 ppm	N.E.
Mineral Spirits	64742-88-7	5.0	100 ppm	N.E.	100 ppm	N.E.
Ethylbenzene	100-41-4	5.0	20 ppm	125 ppm	100 ppm	N.E.
Talc	14807-96-6	5.0	2 mg/m3	N.E.	0.1 mg/m3 [Respirable]	N.E.

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash with soap and water. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

5. Fire-fighting Measures

Flash Point, °F -156 (Setaflash)

EXTINGUISHING MEDIA: Alcohol Foam, Carbon Dioxide, Dry Chemical, Foam, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can.

SPECIAL FIREFIGHTING PROCEDURES: Evacuate area and fight fire from a safe distance.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Use only in a well-ventilated area. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing vapor or mist.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F.

8. Exposure Controls/Personal Protection

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

SKIN PROTECTION: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking.

9. Physical and Chemical Properties

Vapor Density	Heavier than Air	**Odor:**	Solvent Like
Appearance:	Aerosolized Mist	**Evaporation Rate:**	Faster than Ether
Solubility in Water:	Slight	**Freeze Point:**	N.D.
Specific Gravity:	0.780	**pH:**	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological Information

Chemical Name	LD50	LC50
Liquefied Petroleum Gas	N.E.	N.E.
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Naphtha, Petroleum, Hydrotreated Light	N.E.	N.E.
Aliphatic Hydrocarbon	>5000 mg/kg (Rat, Oral)	N.E.
Mineral Spirits	>5000 mg/kg (Rat, Oral)	>1400 ppm (Rat, Inhalation, 4Hr)
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.
Talc	N.E.	TCLo: 11 mg/m3 (Inhalation)

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA ‘ Hazard Categories ’ promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

SARA SECTION 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

No Sara 313 components exist in this product.

TOXIC SUBSTANCES CONTROL ACT:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b)components exist in this product.

International Regulations:

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

Canadian WHMIS Class: AB5 D2A

16. Other Information

HMIS Ratings:

Health:	2*	**Flammability:**	4	**Physical Hazard:**	0	**Personal Protection:**	X

NFPA Ratings:

Health:	2	**Flammability:**	4	**Instability**	0

VOLATILE ORGANIC COMPOUNDS, g/L: 521

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	PTOUCH 2X +SSPR 6PK SEMI-GLOSS BLACK	Revision Date:	05/06/2011
Identification Number:	249061		
Product Use/Class:	Topcoat/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Acetone	67-64-1	40.0	500 ppm	750 ppm	1000 ppm	N.E.
Liquefied Petroleum Gas	68476-86-8	30.0	N.E.	N.E.	N.E.	N.E.
Naphtha	8032-32-4	10.0	N.E.	N.E.	N.E.	N.E.
Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
Solvent Naptha, Light Aromatic	64742-95-6	5.0	N.E.	N.E.	N.E.	N.E.
1,2,4-Trimethylbenzene	95-63-6	5.0	25 ppm	N.E.	N.E.	N.E.
Ethylbenzene	100-41-4	5.0	100 ppm	125 ppm	100 ppm	N.E.
Carbon Black	1333-86-4	1.0	3.5 mg/m3	N.E.	3.5 mg/m3	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Harmful if swallowed. Extremely flammable liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue,

mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage.

Contains carbon black. Chronic inflammation, lung fibrosis, and lung tumors have been observed in some rats experimentally exposed for long periods of time to excessive concentrations of carbon black and several insoluble fine dust particles. Tumors have not been observed in other animal species (i.e., mouse and hamster) under similar circumstances and study conditions. Epidemiological studies of North American workers show no evidence of clinically significant adverse health effects due to occupational exposure to carbon black.

Carbon black is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC and is proposed to be listed as A4- "not classified as a human carcinogen" by the American Conference of Governmental Industrial Hygienists. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of carbon black in the formula.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Water Fog

Unusual Fire And Explosion Hazards: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Perforation of the pressurized container may cause bursting of the can. Isolate from heat, electrical equipment, sparks and open flame. Keep containers tightly closed. Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Use only in a well-ventilated area. Avoid breathing vapor or mist. Wash thoroughly after handling. Wash hands before eating.

Storage: Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use explosion-proof ventilation equipment. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Aerosolized Mist	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight	Freeze Point:	N.D.
Specific Gravity:	0.747	pH:	N.D.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it

emits acrid smoke and irritating fumes.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Liquefied Petroleum Gas	N.E.	N.E.
Naphtha	>5000 mg/kg (Rat, Oral)	N.E.
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Solvent Naptha, Light Aromatic	4700 mg/kg (Rat, Oral)	3670 mg/kg (Rat, Inhalation)
1,2,4-Trimethylbenzene	N.E.	18000 mg/m3 (Rat, 4Hr)
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.
Carbon Black	>8000 mg/kg (Rat, Oral)	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	N.A.	Yes	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Xylene	1330-20-7
1,2,4-Trimethylbenzene	95-63-6
Ethylbenzene	100-41-4

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY
Barium Sulfate	7727-43-7

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Reactivity: 0 Personal Protection: X

NFPA Ratings:

Health: 2 Flammability: 4 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 523

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions

of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	PTOUCH 2X +SSPR 6PK SATIN HEIRLOOM WHITE	Revision Date:	08/15/2011
Identification Number:	249076		
Product Use/Class:	Topcoat/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Liquefied Petroleum Gas	68476-86-8	30.0	N.E.	N.E.	N.E.	N.E.
Acetone	67-64-1	30.0	500 ppm	750 ppm	1000 ppm	N.E.
Titanium Dioxide	13463-67-7	20.0	10 mg/m3	N.E.	15 mg/m3 (Total Dust)	N.E.
Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
Naphtha	8032-32-4	10.0	N.E.	N.E.	N.E.	N.E.
Mineral Spirits	64742-88-7	5.0	100 ppm	N.E.	100 ppm	N.E.
Aliphatic Hydrocarbon	64742-89-8	5.0	100 ppm	N.E.	100 ppm	N.E.
Ethylbenzene	100-41-4	5.0	100 ppm	125 ppm	100 ppm	N.E.
Magnesium Silicate	14807-96-6	5.0	2 mg/m3	N.E.	0.1 mg/m3 (Respirable)	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Harmful if swallowed. Extremely flammable liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group

2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula.
May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

Unusual Fire And Explosion Hazards: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Perforation of the pressurized container may cause bursting of the can. Isolate from heat, electrical equipment, sparks and open flame. Keep containers tightly closed. Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Use only in a well-ventilated area. Avoid breathing vapor or mist. Wash thoroughly after handling. Wash hands before eating.

Storage: Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use explosion-proof ventilation equipment. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Aerosolized Mist	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight	Freeze Point:	N.D.
Specific Gravity:	0.814	pH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Liquefied Petroleum Gas	N.E.	N.E.
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Naphtha	>5000 mg/kg (Rat, Oral)	N.E.
Mineral Spirits	>5000 mg/kg (Rat, Oral)	>1400 ppm (Rat, Inhalation, 4Hr)
Aliphatic Hydrocarbon	>5000 mg/kg (Rat, Oral)	N.E.
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.
Magnesium Silicate	N.E.	TCLo: 11 mg/m3 (Inhalation)

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	N.A.	Yes	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Xylene	1330-20-7
Ethylbenzene	100-41-4

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Physical Hazard: 0 Personal Protection: X

NFPA Ratings:

Health: 2 Flammability: 4 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 525

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is

the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	PTOUCH 2X SSPR 6PK GLOSS REAL ORANGE	Revision Date:	01/14/2009
Identification Number:	249095		
Product Use/Class:	Topcoat/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Acetone	67-64-1	40.0	500 ppm	750 ppm	750 ppm	N.E.
Liquefied Petroleum Gas	68476-86-8	25.0	1000 ppm	N.E.	1000 ppm	N.E.
Naphtha	8032-32-4	10.0	300 ppm	N.E.	N.E.	N.E.
Xylene	1330-20-7	5.0	100 ppm	150 ppm	100 ppm	N.E.
Aromatic Solvent	64742-95-6	5.0	N.E.	N.E.	N.E.	N.E.
1,2,4-Trimethylbenzene	95-63-6	5.0	25 ppm	N.E.	N.E.	N.E.
Ethylbenzene	100-41-4	5.0	100 ppm	125 ppm	100 ppm	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Contains Aromatic Distillate, which may cause cancer. Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Harmful if swallowed. Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing vapors or mists.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B).

May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue,

mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F
(Setaflash)

LOWER EXPLOSIVE LIMIT: 0.7 %
UPPER EXPLOSIVE LIMIT : 12.8 %

Extinguishing Media: Alcohol, Carbon Dioxide, Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: Water spray may be ineffective. FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing vapor or mist. Wash thoroughly after handling. Use only in a well-ventilated area. Wash hands before eating.

Storage: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Boiling Range:	-34 - 662 F	Vapor Density:	Heavier than Air
Odor:	Solvent Like	Odor Threshold:	N.E.
Appearance:	Liquid	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight		
Freeze Point:	N.D.	Specific Gravity:	0.752
Vapor Pressure:	N.D.	PH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition, it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Product LD50: N.D.

Product LC50: N.D.

Chemical Name	LD50	LC50
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Liquefied Petroleum Gas	N.E.	N.E.
Naphtha	>5000 mg/kg (Rat, Oral)	N.E.
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Aromatic Solvent	4700 mg/kg (Rat, Oral)	3670 mg/kg (Rat, Inhalation)
1,2,4-Trimethylbenzene	N.E.	18000 mg/m3 (Rat, 4Hr)
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Aerosols	Packing Group:	N.A.
DOT Technical Name:	N.A.	Hazard Subclass:	N.A.
DOT Hazard Class:	2.1	Resp. Guide Page:	126
DOT UN/NA Number:	UN1950		

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Xylene	1330-20-7
1,2,4-Trimethylbenzene	95-63-6
Ethylbenzene	100-41-4

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY

California Proposition 65:

WARNING! This product contains a chemical(s) known by the State of California to cause cancer.

WARNING! This product contains a chemical(s) known to the state of California to cause birth defects or other reproductive harm.

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Reactivity: 0 Personal Protection: X

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	PTOUCH 2X +SSPR 6PK GLOSS PURPLE	Revision Date:	06/30/2011
Identification Number:	249097		
Product Use/Class:	Topcoat/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Acetone	67-64-1	40.0	500 ppm	750 ppm	1000 ppm	N.E.
Liquefied Petroleum Gas	68476-86-8	25.0	N.E.	N.E.	N.E.	N.E.
Naphtha	8032-32-4	10.0	N.E.	N.E.	N.E.	N.E.
Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
Solvent Naptha, Light Aromatic	64742-95-6	5.0	N.E.	N.E.	N.E.	N.E.
1,2,4-Trimethylbenzene	95-63-6	5.0	25 ppm	N.E.	N.E.	N.E.
Ethylbenzene	100-41-4	5.0	100 ppm	125 ppm	100 ppm	N.E.
Titanium Dioxide	13463-67-7	5.0	10 mg/m3	N.E.	15 mg/m3 (Total Dust)	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Harmful if swallowed. Extremely flammable liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by

IARC. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula.
May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Water Fog

Unusual Fire And Explosion Hazards: Keep containers tightly closed. FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Perforation of the pressurized container may cause bursting of the can. Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Isolate from heat, electrical equipment, sparks and open flame.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Wash thoroughly after handling. Wash hands before eating. Use only in a well-ventilated area. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing vapor or mist.

Storage: Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of

NFPA Class I flammable liquids. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not expose to heat or store above 120 ° F.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use explosion-proof ventilation equipment.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Aerosolized Mist	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight	Freeze Point:	N.D.
Specific Gravity:	0.754	pH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid all possible sources of ignition. Avoid temperatures above 120 ° F.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Liquefied Petroleum Gas	N.E.	N.E.
Naphtha	>5000 mg/kg (Rat, Oral)	N.E.
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Solvent Naptha, Light Aromatic	4700 mg/kg (Rat, Oral)	3670 mg/kg (Rat, Inhalation)
1,2,4-Trimethylbenzene	N.E.	18000 mg/m3 (Rat, 4Hr)
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	Yes	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD, PRESSURIZED GAS HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Xylene	1330-20-7
1,2,4-Trimethylbenzene	95-63-6
Ethylbenzene	100-41-4

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Reactivity: 0 Personal Protection: X

NFPA Ratings:

Health: 2 Flammability: 4 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 512

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is

the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

1. Identification

Product Name: PTOUCH 2X +SSPR 6PK GLOSS MEADOW GREEN

Revision Date: 6/15/2012

Identification Number: 249100

Product Use/Class: Topcoat/Aerosol

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Preparer: Regulatory Department

2. Hazard Identification

EMERGENCY OVERVIEW: Harmful if swallowed. Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Substance may cause slight skin irritation. Prolonged or repeated contact may cause skin irritation.

EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing vapors or mists. High vapor concentrations are irritating to the eyes, nose, throat and lungs.

EFFECTS OF OVEREXPOSURE - INGESTION: Substance may be harmful if swallowed. Aspiration hazard if swallowed; can enter lungs and cause damage.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

3. Composition/Information On Ingredients

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Acetone	67-64-1	40.0	500 ppm	750 ppm	1000 ppm	N.E.
Liquefied Petroleum Gas	68476-86-8	25.0	N.E.	N.E.	N.E.	N.E.
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	10.0	200 mg/m3	N.E.	N.E.	N.E.
Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
Solvent Naptha, Light Aromatic	64742-95-6	5.0	N.E.	N.E.	N.E.	N.E.
1,2,4-Trimethylbenzene	95-63-6	5.0	25 ppm	N.E.	N.E.	N.E.

Ethylbenzene	100-41-4	5.0	20 ppm	125 ppm	100 ppm	N.E.
Titanium Dioxide	13463-67-7	1.0	10 mg/m3	N.E.	15 mg/m3 [Total Dust]	N.E.

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash with soap and water. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

5. Fire-fighting Measures

Flash Point, °F -156 (Setaflash)

EXTINGUISHING MEDIA: Alcohol Foam, Carbon Dioxide, Dry Chemical, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can.

SPECIAL FIREFIGHTING PROCEDURES: Evacuate area and fight fire from a safe distance.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Use only in a well-ventilated area. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing vapor or mist.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F.

8. Exposure Controls/Personal Protection

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

SKIN PROTECTION: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking.

9. Physical and Chemical Properties

Vapor Density	Heavier than Air	**Odor:**	Solvent Like
Appearance:	Aerosolized Mist	**Evaporation Rate:**	Faster than Ether
Solubility in Water:	Slight	**Freeze Point:**	N.D.
Specific Gravity:	0.750	**pH:**	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological Information

Chemical Name	LD50	LC50
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Liquefied Petroleum Gas	N.E.	N.E.
Naphtha, Petroleum, Hydrotreated Light	N.E.	N.E.
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Solvent Naptha, Light Aromatic	4700 mg/kg (Rat, Oral)	3670 mg/kg (Rat, Inhalation)
1,2,4-Trimethylbenzene	N.E.	18000 mg/m3 (Rat, 4Hr)
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA ' Hazard Categories ' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

SARA SECTION 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

No Sara 313 components exist in this product.

TOXIC SUBSTANCES CONTROL ACT:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b)components exist in this product.

International Regulations:

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

Canadian WHMIS Class: AB5 D2A

16. Other Information

HMIS Ratings:

Health: 2* **Flammability:** 4 **Physical Hazard:** 0 **Personal Protection:** X

NFPA Ratings:

Health: 2 **Flammability:** 4 **Instability** 0

VOLATILE ORGANIC COMPOUNDS, g/L: 513

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	PTOUCH 2X +SSPR 6PK GLOSS HUNTER GREEN	Revision Date:	06/30/2011
Identification Number:	249111		
Product Use/Class:	Topcoat/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL -TWA	OSHA PEL CEILING
Acetone	67-64-1	30.0	500 ppm	750 ppm	1000 ppm	N.E.
Liquefied Petroleum Gas	68476-86-8	30.0	N.E.	N.E.	N.E.	N.E.
Naphtha	8032-32-4	10.0	N.E.	N.E.	N.E.	N.E.
Solvent Naptha, Light Aromatic	64742-95-6	5.0	N.E.	N.E.	N.E.	N.E.
Aliphatic Hydrocarbon	64742-89-8	5.0	100 ppm	N.E.	100 ppm	N.E.
1,2,4-Trimethylbenzene	95-63-6	5.0	25 ppm	N.E.	N.E.	N.E.
Dipropylene Glycol Monobutyl Ether	29911-28-2	5.0	N.E.	N.E.	N.E.	N.E.
Xylene	1330-20-7	5.0	100 ppm	150 ppm	100 ppm	N.E.
Ethylbenzene	100-41-4	1.0	100 ppm	125 ppm	100 ppm	N.E.
Carbon Black	1333-86-4	1.0	3.5 mg/m3	N.E.	3.5 mg/m3	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Harmful if swallowed. Extremely flammable liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage.

Contains carbon black. Chronic inflammation, lung fibrosis, and lung tumors have been observed in some rats experimentally exposed for long periods of time to excessive concentrations of carbon black and several insoluble fine dust particles. Tumors have not been observed in other animal species (i.e., mouse and hamster) under similar circumstances and study conditions. Epidemiological studies of North American workers show no evidence of clinically significant adverse health effects due to occupational exposure to carbon black.

Carbon black is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC and is proposed to be listed as A4- "not classified as a human carcinogen" by the American Conference of Governmental Industrial Hygienists. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of carbon black in the formula.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Water Fog

Unusual Fire And Explosion Hazards: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Perforation of the pressurized container may cause bursting of the can. Isolate from heat, electrical equipment, sparks and open flame. Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust.

Section 7 - Handling And Storage

Handling: Wash thoroughly after handling. Wash hands before eating. Avoid breathing vapor or mist. Use only in a well-ventilated area. Follow all MSDS/label precautions even after container is emptied because it may retain product residues.

Storage: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use explosion-proof ventilation equipment. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Aerosolized Mist	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight	Freeze Point:	N.D.
Specific Gravity:	0.749	pH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Liquefied Petroleum Gas	N.E.	N.E.
Naphtha	>5000 mg/kg (Rat, Oral)	N.E.
Solvent Naptha, Light Aromatic	4700 mg/kg (Rat, Oral)	3670 mg/kg (Rat, Inhalation)
Aliphatic Hydrocarbon	>5000 mg/kg (Rat, Oral)	N.E.
1,2,4-Trimethylbenzene	N.E.	18000 mg/m3 (Rat, 4Hr)
Dipropylene Glycol Monobutyl Ether	4400 mg/kg (Rat, Oral)	N.E.
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.
Carbon Black	>8000 mg/kg (Rat, Oral)	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	Yes	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD, PRESSURIZED GAS HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
1,2,4-Trimethylbenzene	95-63-6
Xylene	1330-20-7

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Reactivity: 0 Personal Protection: X

NFPA Ratings:

Health: 2 Flammability: 4 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 527

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	PTOUCH 2X +SSPR 6PK GLOSS DARK GRAY	Revision Date:	09/23/2011
Identification Number:	249115		
Product Use/Class:	Topcoat/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Acetone	67-64-1	35.0	500 ppm	750 ppm	1000 ppm	N.E.
Liquefied Petroleum Gas	68476-86-8	30.0	N.E.	N.E.	N.E.	N.E.
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	10.0	200 mg/m3	N.E.	N.E.	N.E.
Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
Titanium Dioxide	13463-67-7	5.0	10 mg/m3	N.E.	15 mg/m3 (Total Dust)	N.E.
Mineral Spirits	64742-88-7	5.0	100 ppm	N.E.	100 ppm	N.E.
Ethylbenzene	100-41-4	5.0	100 ppm	125 ppm	100 ppm	N.E.
Dipropylene Glycol Monobutyl Ether	29911-28-2	5.0	N.E.	N.E.	N.E.	N.E.
Carbon Black	1333-86-4	1.0	3.5 mg/m3	N.E.	3.5 mg/m3	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Harmful if swallowed. Extremely flammable liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group

2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula.
May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage.

Contains carbon black. Chronic inflammation, lung fibrosis, and lung tumors have been observed in some rats experimentally exposed for long periods of time to excessive concentrations of carbon black and several insoluble fine dust particles. Tumors have not been observed in other animal species (i.e., mouse and hamster) under similar circumstances and study conditions. Epidemiological studies of North American workers show no evidence of clinically significant adverse health effects due to occupational exposure to carbon black.

Carbon black is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC and is proposed to be listed as A4- "not classified as a human carcinogen" by the American Conference of Governmental Industrial Hygienists. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of carbon black in the formula.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

Unusual Fire And Explosion Hazards: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Perforation of the pressurized container may cause bursting of the can. Isolate from heat, electrical equipment, sparks and open flame. Keep containers tightly closed. Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Use only in a well-ventilated area. Avoid breathing vapor or mist. Wash thoroughly after handling. Wash hands before eating.

Storage: Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use explosion-proof ventilation equipment. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Aerosolized Mist	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight	Freeze Point:	N.D.
Specific Gravity:	0.759	pH:	N.D.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Liquefied Petroleum Gas	N.E.	N.E.
Naphtha, Petroleum, Hydrotreated Light	N.E.	N.E.
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.
Mineral Spirits	>5000 mg/kg (Rat, Oral)	>1400 ppm (Rat, Inhalation, 4Hr)
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.
Dipropylene Glycol Monobutyl Ether	4400 mg/kg (Rat, Oral)	N.E.
Carbon Black	>8000 mg/kg (Rat, Oral)	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	Yes	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD, PRESSURIZED GAS HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Xylene	1330-20-7
Ethylbenzene	100-41-4

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Physical Hazard: 0 Personal Protection: X

NFPA Ratings:

Health: 2 Flammability: 4 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 517

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	PTOUCH 2X +SSPR 6PK GLOSS BLACK	Revision Date:	09/23/2011
Identification Number:	249122		
Product Use/Class:	Topcoat/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Acetone	67-64-1	40.0	500 ppm	750 ppm	1000 ppm	N.E.
Liquefied Petroleum Gas	68476-86-8	25.0	N.E.	N.E.	N.E.	N.E.
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	10.0	200 mg/m3	N.E.	N.E.	N.E.
Solvent Naptha, Light Aromatic	64742-95-6	5.0	N.E.	N.E.	N.E.	N.E.
1,2,4-Trimethylbenzene	95-63-6	5.0	25 ppm	N.E.	N.E.	N.E.
Aliphatic Hydrocarbon	64742-89-8	5.0	100 ppm	N.E.	100 ppm	N.E.
Carbon Black	1333-86-4	5.0	3.5 mg/m3	N.E.	3.5 mg/m3	N.E.
Xylene	1330-20-7	5.0	100 ppm	150 ppm	100 ppm	N.E.
1,3,5-Trimethylbenzene	108-67-8	5.0	25 ppm	N.E.	N.E.	N.E.
Ethylbenzene	100-41-4	1.0	100 ppm	125 ppm	100 ppm	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Harmful if swallowed. Extremely flammable liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage.

Contains carbon black. Chronic inflammation, lung fibrosis, and lung tumors have been observed in some rats experimentally exposed for long periods of time to excessive concentrations of carbon black and several insoluble fine dust particles. Tumors have not been observed in other animal species (i.e., mouse and hamster) under similar circumstances and study conditions. Epidemiological studies of North American workers show no evidence of clinically significant adverse health effects due to occupational exposure to carbon black.

Carbon black is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC and is proposed to be listed as A4- "not classified as a human carcinogen" by the American Conference of Governmental Industrial Hygienists. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of carbon black in the formula.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

Unusual Fire And Explosion Hazards: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Perforation of the pressurized container may cause bursting of the can. Isolate from heat, electrical equipment, sparks and open flame. Keep containers tightly closed. Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Use only in a well-ventilated area. Avoid breathing vapor or mist. Wash thoroughly after handling. Wash hands before eating.

Storage: Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use explosion-proof ventilation equipment. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Aerosolized Mist	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight	Freeze Point:	N.D.
Specific Gravity:	0.740	pH:	N.E.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Liquefied Petroleum Gas	N.E.	N.E.
Naphtha, Petroleum, Hydrotreated Light	N.E.	N.E.
Solvent Naptha, Light Aromatic	4700 mg/kg (Rat, Oral)	3670 mg/kg (Rat, Inhalation)
1,2,4-Trimethylbenzene	N.E.	18000 mg/m3 (Rat, 4Hr)
Aliphatic Hydrocarbon	>5000 mg/kg (Rat, Oral)	N.E.
Carbon Black	>8000 mg/kg (Rat, Oral)	N.E.
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
1,3,5-Trimethylbenzene	1303 mg/kg (Rat, Oral)	24 mg/m3 (Rat, 4Hr)
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	Yes	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD, PRESSURIZED GAS HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
1,2,4-Trimethylbenzene	95-63-6
Xylene	1330-20-7

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Physical Hazard: 0 Personal Protection: X

NFPA Ratings:

Health: N.E. Flammability: 4 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 512

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	PTOUCH 2X +SSPR 6PK GLOSS APPLE RED	Revision Date:	08/12/2011
Identification Number:	249124		
Product Use/Class:	Topcoat/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Acetone	67-64-1	40.0	500 ppm	750 ppm	1000 ppm	N.E.
Liquefied Petroleum Gas	68476-86-8	30.0	N.E.	N.E.	N.E.	N.E.
Naphtha	8032-32-4	10.0	N.E.	N.E.	N.E.	N.E.
Xylene	1330-20-7	5.0	100 ppm	150 ppm	100 ppm	N.E.
Solvent Naptha, Light Aromatic	64742-95-6	5.0	N.E.	N.E.	N.E.	N.E.
1,2,4-Trimethylbenzene	95-63-6	5.0	25 ppm	N.E.	N.E.	N.E.
Ethylbenzene	100-41-4	5.0	100 ppm	125 ppm	100 ppm	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Harmful if swallowed. Extremely flammable liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness,

fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

Unusual Fire And Explosion Hazards: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Perforation of the pressurized container may cause bursting of the can. Isolate from heat, electrical equipment, sparks and open flame. Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust.

Section 7 - Handling And Storage

Handling: Wash thoroughly after handling. Wash hands before eating. Avoid breathing vapor or mist. Use only in a well-ventilated area. Follow all MSDS/label precautions even after container is emptied because it may retain product residues.

Storage: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use explosion-proof ventilation equipment. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Aerosolized Mist	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight	Freeze Point:	N.D.
Specific Gravity:	0.747	pH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50

Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Liquefied Petroleum Gas	N.E.	N.E.
Naphtha	>5000 mg/kg (Rat, Oral)	N.E.
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Solvent Naptha, Light Aromatic	4700 mg/kg (Rat, Oral)	3670 mg/kg (Rat, Inhalation)
1,2,4-Trimethylbenzene	N.E.	18000 mg/m3 (Rat, 4Hr)
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	**International (IMDG)**	**Air (IATA)**
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	N.A.	Yes	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD, PRESSURIZED GAS HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	**CAS Number**
Xylene	1330-20-7
1,2,4-Trimethylbenzene	95-63-6
Ethylbenzene	100-41-4

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Modified Alkyd	PROPRIETARY
Barium Sulfate	7727-43-7

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Physical Hazard: 0 Personal Protection: X

NFPA Ratings:

Health: 2 Flammability: 4 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 508

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	STRUST +SSPR 6PK GLS COBBLESTONE	Revision Date:	12/20/2011
Identification Number:	250703		
Product Use/Class:	Topcoat/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Acetone	67-64-1	30.0	500 ppm	750 ppm	1000 ppm	N.E.
Liquefied Petroleum Gas	68476-86-8	25.0	N.E.	N.E.	N.E.	N.E.
Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
Titanium Dioxide	13463-67-7	10.0	10 mg/m3	N.E.	15 mg/m3 (Total Dust)	N.E.
n-Butyl Acetate	123-86-4	10.0	150 ppm	200 ppm	150 ppm	N.E.
Ethylbenzene	100-41-4	5.0	100 ppm	125 ppm	100 ppm	N.E.
Propylene Glycol Monobutyl Ether	5131-66-8	5.0	N.E.	N.E.	N.E.	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Contents Under Pressure. Harmful if swallowed. Extremely flammable liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. Significant exposure is not anticipated during brush application or

drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula.
IARC lists Ethylbenzene as a possible human carcinogen (group 2B). May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

Unusual Fire And Explosion Hazards: Perforation of the pressurized container may cause bursting of the can. FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Isolate from heat, electrical equipment, sparks and open flame. Keep containers tightly closed.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Wash thoroughly after handling. Wash hands before eating. Use only in a well-ventilated area. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing vapor or mist.

Storage: Contents under pressure. Do not expose to heat or store above 120 ° F. Do not store above 120 ° F.

Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Aerosolized Mist	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight	Freeze Point:	N.D.
Specific Gravity:	0.803	pH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition, it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Liquefied Petroleum Gas	N.E.	N.E.
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.
n-Butyl Acetate	13100 mg/kg (Rat, Oral)	2000 ppm (Rat, Inhalation, 4 Hr)
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.
Propylene Glycol Monobutyl Ether	2200 mg/kg (Rat, Oral)	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	Yes	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD, PRESSURIZED GAS HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Xylene	1330-20-7
Ethylbenzene	100-41-4

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Physical Hazard: 0 Personal Protection: X

NFPA Ratings:

Health: 2 Flammability: 4 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 505

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	STRUST +SSPR 6PK GLS LOBSTER RED	Revision Date:	12/20/2011
Identification Number:	250704		
Product Use/Class:	Topcoat/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Acetone	67-64-1	30.0	500 ppm	750 ppm	1000 ppm	N.E.
Liquefied Petroleum Gas	68476-86-8	25.0	N.E.	N.E.	N.E.	N.E.
Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
n-Butyl Acetate	123-86-4	10.0	150 ppm	200 ppm	150 ppm	N.E.
Ethylbenzene	100-41-4	5.0	100 ppm	125 ppm	100 ppm	N.E.
Propylene Glycol Monobutyl Ether	5131-66-8	5.0	N.E.	N.E.	N.E.	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Contents Under Pressure. Vapors may cause flash fire or explosion. Harmful if swallowed. Extremely flammable liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged

occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

Unusual Fire And Explosion Hazards: Perforation of the pressurized container may cause bursting of the can. Isolate from heat, electrical equipment, sparks and open flame. FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Wash thoroughly after handling. Wash hands before eating. Use only in a well-ventilated area. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing vapor or mist.

Storage: Contents under pressure. Do not expose to heat or store above 120 ° F. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Aerosolized Mist	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight	Freeze Point:	N.D.
Specific Gravity:	0.782	pH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition, it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Liquefied Petroleum Gas	N.E.	N.E.
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)

n-Butyl Acetate	13100 mg/kg (Rat, Oral)	2000 ppm (Rat, Inhalation, 4 Hr)
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.
Propylene Glycol Monobutyl Ether	2200 mg/kg (Rat, Oral)	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	**International (IMDG)**	**Air (IATA)**
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	Yes	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD, PRESSURIZED GAS HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	**CAS Number**
Xylene	1330-20-7
Ethylbenzene	100-41-4

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Physical Hazard: 0 Personal Protection: X

NFPA Ratings:

Health: 2 Flammability: 4 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 499

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	STRUST +SSPR 6PK GLS DARK WALNUT	Revision Date:	08/02/2011
Identification Number:	262661		
Product Use/Class:	Topcoat/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Acetone	67-64-1	35.0	500 ppm	750 ppm	1000 ppm	N.E.
Liquefied Petroleum Gas	68476-86-8	30.0	N.E.	N.E.	N.E.	N.E.
n-Butyl Acetate	123-86-4	10.0	150 ppm	200 ppm	150 ppm	N.E.
Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
Ethylbenzene	100-41-4	5.0	100 ppm	125 ppm	100 ppm	N.E.
Propylene Glycol Monobutyl Ether	5131-66-8	5.0	N.E.	N.E.	N.E.	N.E.
Solvent Naptha, Light Aromatic	64742-95-6	5.0	N.E.	N.E.	N.E.	N.E.
1,2,4-Trimethylbenzene	95-63-6	5.0	25 ppm	N.E.	N.E.	N.E.
Mineral Spirits	64742-88-7	5.0	100 ppm	N.E.	100 ppm	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Harmful if swallowed. Extremely flammable liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group

2B). May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

Unusual Fire And Explosion Hazards: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Perforation of the pressurized container may cause bursting of the can. Isolate from heat, electrical equipment, sparks and open flame. Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust.

Section 7 - Handling And Storage

Handling: Wash thoroughly after handling. Wash hands before eating. Avoid breathing vapor or mist. Use only in a well-ventilated area. Follow all MSDS/label precautions even after container is emptied because it may retain product residues.

Storage: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use explosion-proof ventilation equipment. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Aerosolized Mist	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight	Freeze Point:	N.D.
Specific Gravity:	0.759	pH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50

Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Liquefied Petroleum Gas	N.E.	N.E.
n-Butyl Acetate	13100 mg/kg (Rat, Oral)	2000 ppm (Rat, Inhalation, 4 Hr)
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.
Propylene Glycol Monobutyl Ether	2200 mg/kg (Rat, Oral)	N.E.
Solvent Naptha, Light Aromatic	4700 mg/kg (Rat, Oral)	3670 mg/kg (Rat, Inhalation)
1,2,4-Trimethylbenzene	N.E.	18000 mg/m3 (Rat, 4Hr)
Mineral Spirits	>5000 mg/kg (Rat, Oral)	>1400 ppm (Rat, Inhalation, 4Hr)

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	**International (IMDG)**	**Air (IATA)**
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	Yes	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD, PRESSURIZED GAS HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	**CAS Number**
Xylene	1330-20-7
Ethylbenzene	100-41-4
1,2,4-Trimethylbenzene	95-63-6

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of

TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Modified Alkyd Resin	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Modified Alkyd Resin	PROPRIETARY

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Physical Hazard: 0 Personal Protection: X

NFPA Ratings:

Health: 2 Flammability: 4 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 528

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Safety Data Sheet

RUST-OLEUM CORPORATION
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1. Identification

Product Name:	STRUST SSPR 6PK VINTAGE WARM GOLD	**Revision Date:**	5/25/2016
Product Identifier:	286524	**Supercedes Date:**	10/9/2015
Product Use/Class:	Topcoat/Aerosols		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	**Manufacturer:**	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		
Emergency Telephone:	24 Hour Hotline: 847-367-7700		

2. Hazard Identification

Classification

Symbol(s) of Product

Signal Word
Danger

GHS HAZARD STATEMENTS

Flammable Aerosol, category 1	H222	Extremely flammable aerosol.
Compressed Gas	H280	Contains gas under pressure; may explode if heated.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.
Eye Irritation, category 2	H319	Causes serious eye irritation.
STOT, single exposure, category 3, NE	H336	May cause drowsiness or dizziness.
Germ Cell Mutagenicity, category 1B	H340	May cause genetic defects.
Carcinogenicity, category 1B	H350	May cause cancer.
STOT, repeated exposure, category 1	H372	Causes damage to organs through prolonged or repeated exposure.

GHS LABEL PRECAUTIONARY STATEMENTS

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. NO SMOKING.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P260	Do not breathe dust, fumes, gases, mists, vapors, or spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use personal protective equipment as required.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P313	IF exposed or concerned: Get medical advice/attention.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P410+P403	Protect from sunlight. Store in a well-ventilated place.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F.

GHS SDS PRECAUTIONARY STATEMENTS

P270	Do not eat, drink or smoke when using this product.
P363	Wash contaminated clothing before reuse.

3. Composition/Information On Ingredients

HAZARDOUS SUBSTANCES

Chemical Name	CAS-No.	Wt.% Range	GHS Symbols	GHS Statements
Acetone	67-64-1	25-50	GHS02-GHS07	H225-319-332-336
Propane	74-98-6	10-25	GHS04	H280
n-Butane	106-97-8	2.5-10	GHS04	H280
n-Butyl Acetate	123-86-4	2.5-10	GHS02-GHS07	H226-336
Dimethyl Carbonate	616-38-6	2.5-10	GHS02	H225
Hydrotreated Light Distillate	64742-47-8	2.5-10	GHS08	H304
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	2.5-10	GHS08	H304
Xylene (mixed isomers)	1330-20-7	2.5-10	GHS02-GHS07	H226-315-319-332
Stoddard Solvent	8052-41-3	2.5-10	GHS08	H304-340-350-372
Copper	7440-50-8	1.0-2.5	Not Available	Not Available
Ethylbenzene	100-41-4	0.1-1.0	GHS02-GHS07-GHS08	H225-304-332-373
Ethanol	64-17-5	0.1-1.0	GHS02	H225
Ethylene Glycol Monobutyl Ether	111-76-2	0.1-1.0	GHS07	H302-312-315-319-332
bis(1,2,2,6,6-Pentamethyl-4-Piperidinyl) Sebacate	41556-26-7	0.1-1.0	GHS07	H317

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention. If swallowed, get medical attention.

5. Fire-fighting Measures

EXTINGUISHING MEDIA: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20°F. EXTREMELY FLAMMABLE LIQUID AND VAPOR!Water spray may be ineffective. Closed containers may explode when exposed to extreme heat due to buildup of steam. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. No unusual fire or explosion hazards noted.

SPECIAL FIREFIGHTING PROCEDURES: Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Full protective equipment including self-contained breathing apparatus should be used. Evacuate area and fight fire from a safe distance. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and launder before reuse. Use only with adequate ventilation. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Avoid contact with eyes, skin and clothing.

STORAGE: Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Keep away from heat, sparks, flame and sources of ignition. Avoid excess heat. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials.

8. Exposure Controls/Personal Protection

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Acetone	67-64-1	30.0	250 ppm	500 ppm	1000 ppm	N.E.
Propane	74-98-6	20.0	N.E.	N.E.	1000 ppm	N.E.
n-Butane	106-97-8	10.0	N.E.	1000 ppm	N.E.	N.E.
n-Butyl Acetate	123-86-4	10.0	50 ppm	150 ppm	150 ppm	N.E.
Dimethyl Carbonate	616-38-6	10.0	N.E.	N.E.	N.E.	N.E.
Hydrotreated Light Distillate	64742-47-8	10.0	N.E.	N.E.	N.E.	N.E.
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	5.0	N.E.	N.E.	N.E.	N.E.
Xylene (mixed isomers)	1330-20-7	5.0	100 ppm	150 ppm	100 ppm	N.E.
Stoddard Solvent	8052-41-3	5.0	100 ppm	N.E.	500 ppm	N.E.
Copper	7440-50-8	5.0	0.2 mg/m3	N.E.	0.1 mg/m3	N.E.
Ethylbenzene	100-41-4	1.0	20 ppm	N.E.	100 ppm	N.E.
Ethanol	64-17-5	1.0	N.E.	1000 ppm	1000 ppm	N.E.
Ethylene Glycol Monobutyl Ether	111-76-2	1.0	20 ppm	N.E.	50 ppm	N.E.
bis(1,2,2,6,6-Pentamethyl-4-Piperidinyl) Sebacate	41556-26-7	1.0	N.E.	N.E.	N.E.	N.E.

PERSONAL PROTECTION

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use gloves to prevent prolonged skin contact. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

9. Physical and Chemical Properties

Appearance:	Aerosolized Mist	**Physical State:**	Liquid
Odor:	Solvent Like	**Odor Threshold:**	N.E.
Relative Density:	0.741	**pH:**	N.A.
Freeze Point, °C:	N.D.	**Viscosity:**	No Information
Solubility in Water:	Slight	**Partition Coefficient, n-octanol/ water:**	N.D.
Decompostion Temp., °C:	N.D.		
Boiling Range, °C:	-37 - 537	**Explosive Limits, vol%:**	0.9 - 13.0
Flammability:	Supports Combustion	**Flash Point, °C:**	-96
Evaporation Rate:	Faster than Ether	**Auto-ignition Temp., °C:**	N.D.
Vapor Density:	Heavier than Air	**Vapor Pressure:**	N.D.

(See "Other information" Section for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120°F (49°C). Avoid contact with strong acid and strong bases. Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological information

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes Serious Eye Irritation

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May cause skin irritation. Allergic reactions are possible. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.

EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B).

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

ACUTE TOXICITY VALUES

The acute effects of this product have not been tested. Data on individual components are tabulated below:

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
67-64-1	Acetone	5800 mg/kg Rat	N.I.	50.1 mg/L Rat
74-98-6	Propane	N.I.	N.I.	658 mg/L Rat
106-97-8	n-Butane	N.I.	N.I.	658 mg/L Rat
123-86-4	n-Butyl Acetate	10768 mg/kg Rat	>17600 mg/kg Rabbit	> 21 mg/L Rat
616-38-6	Dimethyl Carbonate	13000 mg/kg Rat	>5000 mg/kg Rabbit	140 mg/L Rat
64742-47-8	Hydrotreated Light Distillate	>5000 mg/kg Rat	>2000 mg/kg Rabbit	>5000 mg/L Rat
64742-49-0	Naphtha, Petroleum, Hydrotreated Light	>5000 mg/kg Rat	>3160 mg/kg Rabbit	>4951 mg/L Rat
1330-20-7	Xylene (mixed isomers)	3500 mg/kg Rat	>4350 mg/kg Rabbit	29.08 mg/L Rat
100-41-4	Ethylbenzene	3500 mg/kg Rat	15400 mg/kg Rabbit	17.2 mg/L Rat
64-17-5	Ethanol	7060 mg/kg Rat	15,800 mg/kg Rabbit	30,000 mg/l Rat
111-76-2	Ethylene Glycol Monobutyl Ether	470 mg/kg Rat	1,060 mg/kg Rabbit	11 mg/L
41556-26-7	bis(1,2,2,6,6-Pentamethyl-4-Piperidinyl) Sebacate	2615 mg/kg Rat	N.I.	N.I.

N.I. - No Information

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state, and federal regulations and ordinances. Do not allow to enter waterways, wastewater, soil, storm drains or sewer systems.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)	TDG (Canada)
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Dimethyl Carbonate	616-38-6
Xylene (mixed isomers)	1330-20-7
Copper	7440-50-8
Ethylbenzene	100-41-4
Ethylene Glycol Monobutyl Ether	111-76-2

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(b) if exported from the United States:

Chemical Name	CAS-No.
n-Nonane	111-84-2

16. Other Information

HMIS RATINGS

Health:	2*	**Flammability:**	4	**Physical Hazard:**	0	**Personal Protection:**	X

NFPA RATINGS

Health:	2	**Flammability:**	4	**Instability**	0

VOLATILE ORGANIC COMPOUNDS, g/L: 565

SDS REVISION DATE: 5/25/2016

REASON FOR REVISION:
Regulatory Formula Source Changed
Product Composition Changed
Substance and/or Product Properties Changed in Section(s):
02 - Hazard Identification
09 - Physical & Chemical Properties
16 - Other Information
Statement(s) Changed

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Safety Data Sheet

RUST-OLEUM CORPORATION
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www.rustoleum.com

1. Identification

Product Name:	STRUST SSPR 6PK VINTAGE MET ROSE GOLD	**Revision Date:**	12/14/2016
Product Identifier:	286564	**Supercedes Date:**	5/25/2016
Product Use/Class:	Topcoat/Aerosols		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	**Manufacturer:**	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		
Emergency Telephone:	24 Hour Hotline: 847-367-7700		

2. Hazard Identification

Classification

Symbol(s) of Product

Signal Word
Danger

Possible Hazards
32% of the mixture consists of ingredient(s) of unknown acute toxicity.

GHS HAZARD STATEMENTS

Carcinogenicity, category 2	H351	Suspected of causing cancer.
Compressed Gas	H280	Contains gas under pressure; may explode if heated.
Eye Irritation, category 2	H319	Causes serious eye irritation.
Flammable Aerosol, category 1	H222	Extremely flammable aerosol.
STOT, repeated exposure, category 1	H372	Causes damage to organs through prolonged or repeated exposure.
STOT, single exposure, category 3, NE	H336	May cause drowsiness or dizziness.

GHS LABEL PRECAUTIONARY STATEMENTS

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P410+P403	Protect from sunlight. Store in a well-ventilated place.
P410+P412	Protect from sunlight. Do no expose to temperatures exceeding 50°C/ 122°F.
P501	Dispose of contents/container in accordance with local, regional and national regulations.

GHS SDS PRECAUTIONARY STATEMENTS

P270	Do not eat, drink or smoke when using this product.

3. Composition/Information On Ingredients

HAZARDOUS SUBSTANCES

Chemical Name	CAS-No.	Wt.% Range	GHS Symbols	GHS Statements
Acetone	67-64-1	25-50	GHS02-GHS07	H225-319-332-336
Propane	74-98-6	10-25	GHS04	H280
n-Butyl Acetate	123-86-4	10-25	GHS02-GHS07	H226-336
n-Butane	106-97-8	2.5-10	GHS04	H280
Dimethyl Carbonate	616-38-6	2.5-10	GHS02	H225
Hydrotreated Light Distillate	64742-47-8	2.5-10	GHS08	H304
Xylenes (o-, m-, p- isomers)	1330-20-7	2.5-10	GHS02-GHS07	H226-315-319-332
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	2.5-10	GHS08	H304
Stoddard Solvent	8052-41-3	1.0-2.5	GHS08	H304-372
Copper	7440-50-8	1.0-2.5	Not Available	Not Available
Ethylbenzene	100-41-4	0.1-1.0	GHS02-GHS07-GHS08	H225-304-332-351-373
Ethanol	64-17-5	0.1-1.0	GHS02	H225
bis(1,2,2,6,6-Pentamethyl-4-Piperidinyl) Sebacate	41556-26-7	0.1-1.0	GHS07	H317

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention. If swallowed, get medical attention.

5. Fire-fighting Measures

EXTINGUISHING MEDIA: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20°F. EXTREMELY FLAMMABLE LIQUID AND VAPOR!Water spray may be ineffective. Closed containers may explode when exposed to extreme heat due to buildup of steam. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. No unusual fire or explosion hazards noted.

SPECIAL FIREFIGHTING PROCEDURES: Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Full protective equipment including self-contained breathing apparatus should be used. Evacuate area and fight fire from a safe distance. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and launder before reuse. Use only with adequate ventilation. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Avoid contact with eyes, skin and clothing.

STORAGE: Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Keep away from heat, sparks, flame and sources of ignition. Avoid excess heat. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials.

8. Exposure Controls/Personal Protection

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Acetone	67-64-1	30.0	250 ppm	500 ppm	1000 ppm	N.E.
Propane	74-98-6	20.0	N.E.	N.E.	1000 ppm	N.E.
n-Butyl Acetate	123-86-4	15.0	50 ppm	150 ppm	150 ppm	N.E.
n-Butane	106-97-8	10.0	N.E.	1000 ppm	N.E.	N.E.
Dimethyl Carbonate	616-38-6	10.0	N.E.	N.E.	N.E.	N.E.
Hydrotreated Light Distillate	64742-47-8	10.0	N.E.	N.E.	N.E.	N.E.
Xylenes (o-, m-, p- isomers)	1330-20-7	5.0	100 ppm	150 ppm	100 ppm	N.E.
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	5.0	N.E.	N.E.	N.E.	N.E.
Stoddard Solvent	8052-41-3	5.0	100 ppm	N.E.	500 ppm	N.E.
Copper	7440-50-8	5.0	0.2 mg/m3	N.E.	0.1 mg/m3	N.E.
Ethylbenzene	100-41-4	1.0	20 ppm	N.E.	100 ppm	N.E.
Ethanol	64-17-5	1.0	N.E.	1000 ppm	1000 ppm	N.E.
bis(1,2,2,6,6-Pentamethyl-4-Piperidinyl) Sebacate	41556-26-7	1.0	N.E.	N.E.	N.E.	N.E.

PERSONAL PROTECTION

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use gloves to prevent prolonged skin contact. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

9. Physical and Chemical Properties

Appearance:	Aerosolized Mist	**Physical State:**	Liquid
Odor:	Solvent Like	**Odor Threshold:**	N.E.
Relative Density:	0.740	**pH:**	N.A.
Freeze Point, °C:	N.D.	**Viscosity:**	N.D.
Solubility in Water:	Slight	**Partition Coefficient, n-octanol/ water:**	N.D.
Decompostion Temp., °C:	N.D.		
Boiling Range, °C:	-37 - 204	**Explosive Limits, vol%:**	0.9 - 13.0
Flammability:	Supports Combustion	**Flash Point, °C:**	-96
Evaporation Rate:	Faster than Ether	**Auto-ignition Temp., °C:**	N.D.
Vapor Density:	Heavier than Air	**Vapor Pressure:**	N.D.

(See "Other information" Section for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120°F (49°C). Avoid contact with strong acid and strong bases. Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological information

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes Serious Eye Irritation

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May cause skin irritation. Allergic reactions are possible. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.

EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B).

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

ACUTE TOXICITY VALUES

The acute effects of this product have not been tested. Data on individual components are tabulated below:

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
67-64-1	Acetone	5800 mg/kg Rat	>15700 mg/kg Rabbit	50.1 mg/L Rat
74-98-6	Propane	N.I.	N.I.	658 mg/L Rat
123-86-4	n-Butyl Acetate	10768 mg/kg Rat	>17600 mg/kg Rabbit	> 21 mg/L Rat
106-97-8	n-Butane	N.I.	N.I.	658 mg/L Rat
616-38-6	Dimethyl Carbonate	13000 mg/kg Rat	>5000 mg/kg Rabbit	140 mg/L Rat
64742-47-8	Hydrotreated Light Distillate	>5000 mg/kg Rat	>2000 mg/kg Rabbit	>5000 mg/L Rat
1330-20-7	Xylenes (o-, m-, p- isomers)	3500 mg/kg Rat	>4350 mg/kg Rabbit	29.08 mg/L Rat
64742-49-0	Naphtha, Petroleum, Hydrotreated Light	>5000 mg/kg Rat	>3160 mg/kg Rabbit	>4951 mg/L Rat
100-41-4	Ethylbenzene	3500 mg/kg Rat	15400 mg/kg Rabbit	17.4 mg/L Rat
64-17-5	Ethanol	7060 mg/kg Rat	15,800 mg/kg Rabbit	30,000 mg/l Rat
41556-26-7	bis(1,2,2,6,6-Pentamethyl-4-Piperidinyl) Sebacate	2615 mg/kg Rat	N.I.	N.I.

N.I. - No Information

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state, and federal regulations and ordinances. Do not allow to enter waterways, wastewater, soil, storm drains or sewer systems.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)	TDG (Canada)
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Dimethyl Carbonate	616-38-6
Xylenes (o-, m-, p- isomers)	1330-20-7
Copper	7440-50-8
Ethylbenzene	100-41-4

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(b) if exported from the United States:

Chemical Name	CAS-No.
n-Nonane	111-84-2

16. Other Information

HMIS RATINGS

Health:	2*	**Flammability:**	4	**Physical Hazard:**	0	**Personal Protection:**	X

NFPA RATINGS

Health:	2	**Flammability:**	4	**Instability**	0

VOLATILE ORGANIC COMPOUNDS, g/L: 611

SDS REVISION DATE: 12/14/2016

REASON FOR REVISION: Product Composition Changed
Substance and/or Product Properties Changed in Section(s):
02 - Hazard Identification
09 - Physical & Chemical Properties
16 - Other Information
Statement(s) Changed

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	ENAMEL 1-GL 2PK 3400 SAFETY BLUE	Revision Date:	04/02/2010
Identification Number:	3425402		
Product Use/Class:	Topcoat/Alkyd		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Mineral Spirits	64742-88-7	30.0	100 ppm	N.E.	100 ppm	N.E.
Titanium Dioxide	13463-67-7	10.0	10 mg/m3	N.E.	15 mg/m3 (Total Dust)	N.E.
Hydrotreated Light Distillate	64742-47-8	5.0	200 mg/m3	N.E.	N.E.	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Harmful if swallowed. Causes eye irritation. Vapors irritating to eyes and respiratory tract. Combustible liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: May cause skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. May cause headaches and dizziness. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B- "Possibly carcinogenic to humans" by IARC. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula.
Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: 104 F
(Setaflash)

LOWER EXPLOSIVE LIMIT: 0.5 %
UPPER EXPLOSIVE LIMIT : 11.2 %

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Water Fog

Unusual Fire And Explosion Hazards: Keep containers tightly closed.

Special Firefighting Procedures: Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Wash thoroughly after handling. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing vapor or mist. Avoid contact with eyes. Wash hands before eating.

Storage: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Keep away from heat, sparks, flame and sources of ignition. Keep container closed when not in use.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Boiling Range:	212 - 999 F	Vapor Density:	Heavier than air
Odor:	Solvent-like	Odor Threshold:	N.E.
Appearance:	Liquid	Evaporation Rate:	Slower than ether
Solubility in H2O:	Slight		
Freeze Point:	ND	Specific Gravity:	0.969
Vapor Pressure:	N.D.	PH:	ND
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition, it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Product LD50: N.D.

Product LC50: N.D.

Chemical Name	LD50	LC50
Mineral Spirits	>8 mg/kg (Rat, Oral)	>1400 ppm (Rat, Inhalation, 4Hr)
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.
Hydrotreated Light Distillate	>3160 mg/kg (Skin)	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Paint	Packing Group:	III
DOT Technical Name:	N.A.	Hazard Subclass:	N.A.
DOT Hazard Class:	3	Resp. Guide Page:	128
DOT UN/NA Number:	UN 1263		

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

It is the policy of Rust-Oleum Corporation to use only TSCA compliant materials in its products.

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Tall Oil Alkyd Resin	PROPRIETARY
Alkyd Resin	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Tall Oil Alkyd Resin	PROPRIETARY
Alkyd Resin	PROPRIETARY

California Proposition 65:

WARNING! This product contains a chemical(s) known by the State of California to cause cancer.

WARNING! This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: B3 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 2 Reactivity: 0 Personal Protection: X

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	ENAMEL 1-GL 2PK 3400 PRIMER	Revision Date:	09/02/2010
Identification Number:	3481402		
Product Use/Class:	Primer/Low Voc Alkyd		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Mineral Spirits	64742-88-7	25.0	100 ppm	N.E.	100 ppm	N.E.
Magnesium Silicate	14807-96-6	25.0	2 mg/m3	N.E.	0.1 mg/m3 (Respirable)	N.E.
Titanium Dioxide	13463-67-7	10.0	10 mg/m3	N.E.	15 mg/m3 (Total Dust)	N.E.
Strontium Zinc Phosphosilicate	MIXTURE	10.0	N.E.	N.E.	N.E.	N.E.
Zinc Oxide	1314-13-2	5.0	2 mg/m3	10 mg/m3	5 mg/m3 (Respirable)	N.E.
Ethylbenzene	100-41-4	1.0	100 ppm	125 ppm	100 ppm	N.E.
Quartz (Crystalline Silica)	14808-60-7	1.0	0.025 mg/m3 (Respirable)	N.E.	2.4 mppcf (Respirable)	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: High vapor concentrations can irritate eyes, nose and respiratory passages. Causes nose and throat irritation. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Harmful if swallowed. Causes eye irritation. Flammable liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated skin contact may cause irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. May cause headaches and dizziness. Avoid breathing vapors or mists. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula.
Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

Contains crystalline silica as silicon dioxide. Excessive inhalation of respirable crystalline silica dust may cause lung disease, silicosis or lung cancer. Significant exposure is not anticipated during brush or trowel application or drying. Risk of overexposure depends on the duration and level of exposure to dust from repeated sanding of surfaces, mechanical abrasion or spray mist and actual concentration of crystalline silica in the formula. Crystalline silica is listed as Group 1 "carcinogenic to humans" by the International Agency for Research on Cancer (IARC), and Group 2 "reasonably anticipated to be a carcinogen" by the National Toxicology Program (NTP).

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: 88 F (Seta)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Water Fog

Unusual Fire And Explosion Hazards: Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Isolate from heat, electrical equipment, sparks and open flame.

Special Firefighting Procedures: Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Eliminate all ignition sources; use explosion-proof equipment. Place material in a container and dispose of according to local, provincial, state and federal regulations. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust.

Section 7 - Handling And Storage

Handling: Wash thoroughly after handling. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Use with adequate ventilation. Wash hands before eating.

Storage: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Keep away from heat, sparks, flame and sources of ignition. Keep container closed when not in use.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than air	Odor:	Mild
Appearance:	Liquid	Evaporation Rate:	Slower than ether
Solubility in H2O:	slight	Freeze Point:	N.D.
Specific Gravity:	1.419	PH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition, it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Mineral Spirits	>5000 mg/kg (Rat, Oral)	>1400 ppm (Rat, Inhalation, 4Hr)
Magnesium Silicate	N.E.	TCLo: 11 mg/m3 (Inhalation)
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.
Strontium Zinc Phosphosilicate	N.E.	N.E.
Zinc Oxide	LDLo: 500 mg/kg (Human)	TCLo: 600 mg/kg (Human)

Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.
Quartz (Crystalline Silica)	N.E.	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	**International (IMDG)**	**Air (IATA)**
Proper Shippping Name:	Consumer Commodity	Paint	Paint
Hazard Class:	ORM-D	3	3
UN Number:	N.A.	UN1263	UN1263
Packing Group:	N.A.	III	III
Limited Quantity:	No	IMDG 34-08, 3.4.7	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	**CAS Number**
Strontium Zinc Phosphosilicate	MIXTURE
Zinc Oxide	1314-13-2

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Alkyd Resin	PROPRIETARY
Limestone	1317-65-3

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Alkyd Resin	PROPRIETARY
Limestone	1317-65-3

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: B2 D2A D2B

Section 16 - Other Information

NFPA Ratings:

Health: 2 Flammability: 3 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/l: 335

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	ENAMEL 1-GL 2PK 3400 SILVER GRAY	Revision Date:	04/02/2010
Identification Number:	3482402		
Product Use/Class:	Topcoat/Alkyd		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Mineral Spirits	64742-88-7	30.0	100 ppm	N.E.	100 ppm	N.E.
Titanium Dioxide	13463-67-7	10.0	10 mg/m3	N.E.	15 mg/m3 (Total Dust)	N.E.
Hydrotreated Light Distillate	64742-47-8	5.0	200 mg/m3	N.E.	N.E.	N.E.
Carbon Black	1333-86-4	1.0	3.5 mg/m3	N.E.	3.5 mg/m3	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Harmful if swallowed. Causes eye irritation. Vapors irritating to eyes and respiratory tract. Combustible liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: May cause skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. May cause headaches and dizziness. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B- "Possibly carcinogenic to humans" by IARC. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula.
Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

Contains carbon black. Chronic inflammation, lung fibrosis, and lung tumors have been observed in some rats experimentally exposed for long periods of time to excessive concentrations of carbon black and several insoluble fine dust particles. Tumors have not been observed in other animal species (i.e., mouse and hamster) under similar circumstances and study conditions. Epidemiological studies of North American workers show no evidence of clinically significant adverse health effects due to occupational exposure to carbon black.

Carbon black is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC and is proposed to be listed as A4- "not classified as a human carcinogen" by the American Conference of Governmental Industrial Hygienists. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of carbon black in the formula.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: 104 F
(Setaflash)

LOWER EXPLOSIVE LIMIT: 0.5 %
UPPER EXPLOSIVE LIMIT : 11.2 %

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Water Fog

Unusual Fire And Explosion Hazards: Keep containers tightly closed.

Special Firefighting Procedures: Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Wash thoroughly after handling. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing vapor or mist. Avoid contact with eyes. Wash hands before eating.

Storage: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Keep away

from heat, sparks, flame and sources of ignition. Keep container closed when not in use.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Boiling Range:	212 - 999 F	Vapor Density:	Heavier than air
Odor:	Solvent-like	Odor Threshold:	ND
Appearance:	Liquid	Evaporation Rate:	Slower than ether
Solubility in H2O:	Slight		
Freeze Point:	ND	Specific Gravity:	0.988
Vapor Pressure:	ND	PH:	ND
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition, it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Product LD50: ND

Product LC50: ND

Chemical Name	LD50	LC50
Mineral Spirits	>8 mg/kg (Rat, Oral)	>1400 ppm (Rat, Inhalation, 4Hr)
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.
Hydrotreated Light Distillate	>3160 mg/kg (Skin)	N.E.
Carbon Black	>8000 mg/kg (Rat, Oral)	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Paint	Packing Group:	III
DOT Technical Name:	N.A.	Hazard Subclass:	N.A.
DOT Hazard Class:	3	Resp. Guide Page:	128
DOT UN/NA Number:	UN 1263		

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

It is the policy of Rust-Oleum Corporation to use only TSCA compliant materials in its products.

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Tall Oil Alkyd Resin	PROPRIETARY
Alkyd Resin	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Tall Oil Alkyd Resin	PROPRIETARY
Alkyd Resin	PROPRIETARY

California Proposition 65:

WARNING! This product contains a chemical(s) known by the State of California to cause cancer.

WARNING! This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: B3 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 2 Reactivity: 0 Personal Protection: X

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	ACRYLC 1-GL 2PK 5200 SAFETY RED	Revision Date:	07/25/2011
Identification Number:	5264402		
Product Use/Class:	Topcoat / WB Acrylic		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Ester Alcohol	25265-77-4	10.0	N.E.	N.E.	N.E.	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Use ventilation necessary to keep exposures below recommended exposure limits, if any.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: Low hazard for usual industrial handling or commercial handling by trained personnel.

Effects Of Overexposure - Ingestion: Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: No Information.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation.

First Aid - Ingestion: Swallowing less than an ounce will not cause significant harm. For larger amounts, do not induce vomiting, but give one or two glasses of water to drink and get medical attention.

Section 5 - Fire Fighting Measures

Flash Point: >200 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Water Fog

Unusual Fire And Explosion Hazards: FLASH POINT IS TESTED TO BE GREATER THAN 200 DEGREES F.

Special Firefighting Procedures: Water may be used to cool closed containers to prevent buildup of steam.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Wash thoroughly after handling. Wash hands before eating. Avoid contact with eyes.

Storage: Keep from freezing. Keep container closed when not in use.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use gloves to prevent prolonged skin contact.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Mild Ammonia
Appearance:	Liquid	Evaporation Rate:	Slower than Ether

Solubility in H2O:	Miscible	Freeze Point:	N.D.
Specific Gravity:	1.043	pH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid contact with strong acid and strong bases.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Ester Alcohol	6517 mg/kg (Rat, Oral)	>3.55 mg/L (Rat, Inhalation, 6Hr)

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Paint, Not Regulated	Paint, Not Regulated	Paint, Not Regulated
Hazard Class:	N.A.	N.A.	N.A.
UN Number:	N.A.	N.A.	N.A.
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	No	No

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

Chemical Name	CAS Number
Benzyl Chloride	100-44-7

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Water	7732-18-5
Modified Acrylic Copolymer	PROPRIETARY
Aqueous Mixed Pigment Red Dispersion	MIXTURE
Modified Acrylic Copolymer	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Water	7732-18-5
Modified Acrylic Copolymer	PROPRIETARY
Aqueous Mixed Pigment Red Dispersion	MIXTURE
Modified Acrylic Copolymer	PROPRIETARY

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2 Flammability: 0 Physical Hazard: 0 Personal Protection: X

NFPA Ratings:

Health: 2 Flammability: 0 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 210

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	PRO 1-GL 2PK GLOSS WHITE 400 VOC	Revision Date:	09/26/2011
Identification Number:	K7792402		
Product Use/Class:	Top Coat/Alkyd		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Mineral Spirits	64742-88-7	35.0	100 ppm	N.E.	100 ppm	N.E.
Titanium Dioxide	13463-67-7	20.0	10 mg/m3	N.E.	15 mg/m3 (Total Dust)	N.E.
Calcined Aluminum Silicate	1332-58-7	5.0	2 mg/m3	N.E.	5 mg/m3 (Respirable)	N.E.
Hydrotreated Light Distillate	64742-47-8	5.0	200 mg/m3	N.E.	N.E.	N.E.
Xylene	1330-20-7	1.0	100 ppm	150 ppm	100 ppm	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Harmful if swallowed. Causes eye irritation. Vapors irritating to eyes and respiratory tract. Combustible liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: May cause skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. May cause headaches and dizziness. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula.
Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver

abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: 104 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

Unusual Fire And Explosion Hazards: Keep containers tightly closed.

Special Firefighting Procedures: Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Wash thoroughly after handling. Wash hands before eating. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing vapor or mist. Avoid contact with eyes.

Storage: Keep away from heat, sparks, flame and sources of ignition. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Keep container closed when not in use.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2

requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Liquid	Evaporation Rate:	Slower than Ether
Solubility in H2O:	Slight	Freeze Point:	N.D.
Specific Gravity:	1.069	pH:	N.D.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Mineral Spirits	>5000 mg/kg (Rat, Oral)	>1400 ppm (Rat, Inhalation, 4Hr)
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.
Calcined Aluminum Silicate	5000 mg/kg (Rat, Oral)	N.E.
Hydrotreated Light Distillate	>3160 mg/kg (Skin)	N.E.
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Paint, Not Regulated	Paint	Paint
Hazard Class:	N.A.	3	3
UN Number:	N.A.	UN1263	UN1263
Packing Group:	N.A.	III	III
Limited Quantity:	No	IMDG 34-08, 3.4.7	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Xylene	1330-20-7

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Tall Oil Alkyd Resin	PROPRIETARY
Alkyd Resin	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Tall Oil Alkyd Resin	PROPRIETARY
Alkyd Resin	PROPRIETARY

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: B3 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 2 Physical Hazard: 0 Personal Protection: X

NFPA Ratings:

Health: 2 Flammability: 2 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 394

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

RUST-OLEUM CORPORATION

1. Identification

Product Name: ROHPER LSPR 6PK SILVER ALUMINUM **Revision Date:** 2/25/2014

Product Number: V2115838

Product Use/Class: Topcoat/Aerosol

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Prepared by: Regulatory Department

2. Hazard Identification

EMERGENCY OVERVIEW: Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Contents Under Pressure. May cause eye, skin, or respiratory tract irritation. KEEP OUT OF REACH OF CHILDREN. Harmful if inhaled. Harmful if swallowed. Causes eye irritation. Use ventilation necessary to keep exposures below recommended exposure limits, if any. Vapor Harmful. Causes Eye, Skin, Nose, and Throat Irritation.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes Serious Eye Irritation

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May be absorbed through the skin in harmful amounts. May cause skin irritation. Allergic reactions are possible.

EFFECTS OF OVEREXPOSURE - INHALATION: High gas, vapor, mist or dust concentrations may be harmful if inhaled. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

3. Composition/Information On Ingredients

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Acetone	67-64-1	35.0	500 ppm	750 ppm	1000 ppm	N.E.
Liquefied Petroleum Gas	68476-86-8	35.0	N.E.	N.E.	N.E.	N.E.
Toluene	108-88-3	20.0	20 ppm	N.E.	200 ppm	300 ppm
Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
Aluminum Flake	7429-90-5	5.0	1 mg/m3	N.E.	15 mg/m3 [Total Dust]	N.E.
Ethylbenzene	100-41-4	5.0	20 ppm	125 ppm	100 ppm	N.E.

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: If swallowed, get medical attention.

5. Fire-fighting Measures

Flash Point, °F -156 (Setaflash)

Extinguishing Media: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR!Water spray may be ineffective. Closed containers may explode when exposed to extreme heat due to buildup of steam. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. No unusual fire or explosion hazards noted. Keep containers tightly closed.

SPECIAL FIREFIGHTING PROCEDURES: Full protective equipment including self-contained breathing apparatus should be used. Evacuate area and fight fire from a safe distance. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and launder before reuse. Use only with adequate ventilation. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Avoid contact with eyes, skin and clothing.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials. Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep away from heat, sparks, flame and sources of ignition. Avoid excess heat.

8. Exposure Controls/Personal Protection

ENGINEERING CONTROLS: Use explosion-proof ventilation equipment. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use gloves to prevent prolonged skin contact. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

9. Physical and Chemical Properties

Vapor Density	Heavier than air	**Odor:**	Solvent
Appearance:	Aerosolized Mist	**Evaporation Rate:**	Faster than Ether
Solubility in Water:	Slight	**Freeze Point:**	ND
Specific Gravity:	0.726	**pH:**	ND
Physical State:	Liquid		

(See section 16 for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Flammable hydrogen gas will evolve when product comes in contact with water or damp air. Heat will be generated. The amount of heat generated will depend upon the volume of material in contact. Avoid temperatures above 120 ° F. Avoid contact with strong acid and strong bases. Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological Information

Chemical Name	LD50	LC50
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Liquefied Petroleum Gas	N.E.	N.E.
Toluene	636 mg/kg (Rat, Oral)	>26,700 ppm (Rat, Inhalation, 1Hr)
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Aluminum Flake	>2000 mg/kg (Rat, Oral)	7.6 mg/L (Rat, Inhalation)
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter waterways, wastewater. soil, storm drains or sewer systems.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)	TDG (Canada)
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Toluene	108-88-3
Xylene	1330-20-7
Aluminum Flake	7429-90-5
Ethylbenzene	100-41-4

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b) components exist in this product.

International Regulations:

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

Canadian WHMIS Class: A B5 D2A D2B

16. Other Information

HMIS Ratings:

Health:	2*	**Flammability:**	4	**Physical Hazard:**	0	**Personal Protection:**	X

NFPA Ratings:

Health:	2	**Flammability:**	4	**Instability**	0

VOLATILE ORGANIC COMPOUNDS, g/L: 601

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700

1. Identification

Product Name: ROHPER LSPR 6PK GLOSS SAFETY BLUE **Revision Date:** 5/14/2013

Identification Number: V2124838

Product Use/Class: Topcoat/Aerosols

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Preparer: Regulatory Department

2. Hazard Identification

EMERGENCY OVERVIEW: Harmful if swallowed. Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Contents Under Pressure.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Substance may cause slight skin irritation. Prolonged or repeated contact may cause skin irritation.

EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. High vapor concentrations are irritating to the eyes, nose, throat and lungs.

EFFECTS OF OVEREXPOSURE - INGESTION: Substance may be harmful if swallowed. Aspiration hazard if swallowed; can enter lungs and cause damage.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula. Overexposure to methyl ethyl ketone in laboratory animals has been associated with liver abnormalities, kidney and lung damage. Fetotoxic/embryotoxic effects from inhalation have been seen in rats exposed to >1000ppm during gestation. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

3. Composition/Information On Ingredients

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Liquefied Petroleum Gas	68476-86-8	25.0	N.E.	N.E.	N.E.	N.E.
Acetone	67-64-1	20.0	500 ppm	750 ppm	1000 ppm	N.E.
Alkyd Resin	PROPRIETARY	20.0	N.E.	N.E.	N.E.	N.E.
n-Butyl Acetate	123-86-4	10.0	150 ppm	200 ppm	150 ppm	N.E.

Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
Barium Sulfate	7727-43-7	10.0	10 mg/m3	N.E.	15 mg/m3 [Total Dust]	N.E.
Methyl Ethyl Ketone	78-93-3	10.0	200 ppm	300 ppm	200 ppm	N.E.
Titanium Dioxide	13463-67-7	5.0	10 mg/m3	N.E.	15 mg/m3 [Total Dust]	N.E.
Ethylbenzene	100-41-4	5.0	20 ppm	125 ppm	100 ppm	N.E.
Titanium Dioxide	1317-80-2	5.0	10 mg/m3	N.E.	15 mg/m3 (Total Dust)	N.E.
Propylene Glycol Monobutyl Ether	5131-66-8	5.0	N.E.	N.E.	N.E.	N.E.
Aromatic Petroleum Distillates	64742-94-5	5.0	N.E.	N.E.	N.E.	N.E.
Solvent Naptha, Light Aromatic	64742-95-6	1.0	N.E.	N.E.	N.E.	N.E.

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

5. Fire-fighting Measures

Flash Point, °F -156 (Setaflash)

Extinguishing Media: Alcohol Foam, Carbon Dioxide, Dry Chemical, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can.

SPECIAL FIREFIGHTING PROCEDURES: Evacuate area and fight fire from a safe distance.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Use only in a well-ventilated area. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F.

8. Exposure Controls/Personal Protection

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

SKIN PROTECTION: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking.

9. Physical and Chemical Properties

Vapor Density	Heavier than Air	**Odor:**	Solvent Like
Appearance:	Aerosolized Mist	**Evaporation Rate:**	Faster than Ether
Solubility in Water:	Slight	**Freeze Point:**	N.D.
Specific Gravity:	0.835	**pH:**	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological Information

Chemical Name	LD50	LC50
Liquefied Petroleum Gas	N.E.	N.E.
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Alkyd Resin	N.E.	N.E.
n-Butyl Acetate	13100 mg/kg (Rat, Oral)	2000 ppm (Rat, Inhalation, 4 Hr)
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Barium Sulfate	N.E.	N.E.

Methyl Ethyl Ketone	N.E.	N.E.
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.
Propylene Glycol Monobutyl Ether	2200 mg/kg (Rat, Oral)	N.E.
Aromatic Petroleum Distillates	4900 mg/kg (Rat, Oral)	N.E.
Solvent Naptha, Light Aromatic	4700 mg/kg (Rat, Oral)	3670 mg/kg (Rat, Inhalation)

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter waterways, wastewater. soil, storm drains or sewer systems.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols
Hazard Class:	N.A.	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Xylene	1330-20-7
Methyl Ethyl Ketone	78-93-3
Ethylbenzene	100-41-4
Aromatic Petroleum Distillates	64742-94-5
Diethylene Glycol Methyl Ether	111-77-3

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b)components exist in this product.

International Regulations:

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

Canadian WHMIS Class: AB5 D2A

16. Other Information

HMIS Ratings:

Health: 2* **Flammability:** 3 **Physical Hazard:** 0 **Personal Protection:** X

NFPA Ratings:

Health: 2 **Flammability:** 4 **Instability** 0

Volatile Organic Compounds, g/L: 546

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

1. Identification

Product Name: ROHPER LSPR 6PK GLOSS SAFETY GREEN **Revision Date:** 3/23/2012

Identification Number: V2133838

Product Use/Class: Topcoat/Aerosols

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Preparer: Regulatory Department

2. Hazard Identification

EMERGENCY OVERVIEW: Harmful if swallowed. Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Contents Under Pressure.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Substance may cause slight skin irritation. Prolonged or repeated contact may cause skin irritation.

EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing vapors or mists. High vapor concentrations are irritating to the eyes, nose, throat and lungs.

EFFECTS OF OVEREXPOSURE - INGESTION: Substance may be harmful if swallowed. Aspiration hazard if swallowed; can enter lungs and cause damage.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula. Overexposure to methyl ethyl ketone in laboratory animals has been associated with liver abnormalities, kidney and lung damage. Fetotoxic/embryotoxic effects from inhalation have been seen in rats exposed to >1000ppm during gestation. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

3. Composition/Information On Ingredients

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Liquefied Petroleum Gas	68476-86-8	25.0	N.E.	N.E.	N.E.	N.E.
Acetone	67-64-1	25.0	500 ppm	750 ppm	1000 ppm	N.E.
n-Butyl Acetate	123-86-4	10.0	150 ppm	200 ppm	150 ppm	N.E.
Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
Methyl Ethyl Ketone	78-93-3	10.0	200 ppm	300 ppm	200 ppm	N.E.

Titanium Dioxide	13463-67-7	5.0	10 mg/m3	N.E.	15 mg/m3 (Total Dust)	N.E.
Barium Sulfate	7727-43-7	5.0	10 mg/m3	N.E.	15 mg/m3	N.E.
Ethylbenzene	100-41-4	5.0	100 ppm	125 ppm	100 ppm	N.E.
Propylene Glycol Monobutyl Ether	5131-66-8	5.0	N.E.	N.E.	N.E.	N.E.
Aromatic Petroleum Distillates	64742-94-5	5.0	N.E.	N.E.	N.E.	N.E.
Solvent Naptha, Light Aromatic	64742-95-6	1.0	N.E.	N.E.	N.E.	N.E.

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash with soap and water. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

5. Fire-fighting Measures

Flash Point, °F -156 (Setaflash)

EXTINGUISHING MEDIA: Alcohol Foam, Carbon Dioxide, Dry Chemical, Foam, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can.

SPECIAL FIREFIGHTING PROCEDURES: Evacuate area and fight fire from a safe distance.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Use only in a well-ventilated area. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing vapor or mist.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F.

8. Exposure Controls/Personal Protection

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

SKIN PROTECTION: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking.

9. Physical and Chemical Properties

Vapor Density	HEAVIER THAN AIR	**Odor:**	Solvent Like
Appearance:	Aerosolized Mist	**Evaporation Rate:**	Faster than ether
Solubility in Water:	Slight	**Freeze Point:**	N.D.
Specific Gravity:	0.810	**pH:**	N.D.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological Information

Chemical Name	LD50	LC50
Liquefied Petroleum Gas	N.E.	N.E.
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
n-Butyl Acetate	13100 mg/kg (Rat, Oral)	2000 ppm (Rat, Inhalation, 4 Hr)
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Methyl Ethyl Ketone	N.E.	N.E.
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.
Barium Sulfate	N.E.	N.E.
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.
Propylene Glycol Monobutyl Ether	2200 mg/kg (Rat, Oral)	N.E.

Aromatic Petroleum Distillates	4900 mg/kg (Rat, Oral)	N.E.
Solvent Naptha, Light Aromatic	4700 mg/kg (Rat, Oral)	3670 mg/kg (Rat, Inhalation)

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA ‘ Hazard Categories ’ promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

SARA SECTION 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

No Sara 313 components exist in this product.

TOXIC SUBSTANCES CONTROL ACT:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b)components exist in this product.

International Regulations:

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

Canadian WHMIS Class: AB5 D2A

16. Other Information

HMIS Ratings:

Health:	2*	**Flammability:**	4	**Physical Hazard:**	0	**Personal Protection:**	X

NFPA Ratings:

Health:	2	**Flammability:**	4	**Instability**	0

VOLATILE ORGANIC COMPOUNDS, g/L: 546

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

1. Identification

Product Name: ROHPER LSPR 6PK GLOSS SAFETY PURPLE **Revision Date:** 12/18/2013

Product Number: V2167838

Product Use/Class: Topcoat/Aerosols

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Prepared by: Regulatory Department

2. Hazard Identification

EMERGENCY OVERVIEW: Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Contents Under Pressure. May cause eye, skin, or respiratory tract irritation. KEEP OUT OF REACH OF CHILDREN. Harmful if inhaled. Harmful if swallowed. Causes eye irritation. Use ventilation necessary to keep exposures below recommended exposure limits, if any. Vapor Harmful. Causes Eye, Skin, Nose, and Throat Irritation.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes Serious Eye Irritation

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May cause skin irritation. Allergic reactions are possible.

EFFECTS OF OVEREXPOSURE - INHALATION: High gas, vapor, mist or dust concentrations may be harmful if inhaled. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. No significant exposure to Titanium Dioxide is thought to occur during the use of products in which Titanium Dioxide is bound to other materials, such as in paints during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula. (Ref: IARC Monograph, Vol. 93, 2010)Overexposure to methyl ethyl ketone in laboratory animals has been associated with liver abnormalities, kidney and lung damage. Fetotoxic/embryotoxic effects from inhalation have been seen in rats exposed to > 1000ppm during gestation. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

3. Composition/Information On Ingredients

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Liquefied Petroleum Gas	68476-86-8	25.0	N.E.	N.E.	N.E.	N.E.
Acetone	67-64-1	25.0	500 ppm	750 ppm	1000 ppm	N.E.
Alkyd Resin	PROPRIETARY	20.0	N.E.	N.E.	N.E.	N.E.
n-Butyl Acetate	123-86-4	10.0	150 ppm	200 ppm	150 ppm	N.E.

Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
Barium Sulfate	7727-43-7	10.0	10 mg/m3	N.E.	15 mg/m3 [Total Dust]	N.E.
Methyl Ethyl Ketone	78-93-3	5.0	200 ppm	300 ppm	200 ppm	N.E.
Titanium Dioxide	13463-67-7	5.0	10 mg/m3	N.E.	15 mg/m3 [Total Dust]	N.E.
Ethylbenzene	100-41-4	5.0	20 ppm	125 ppm	100 ppm	N.E.
Propylene Glycol Monobutyl Ether	5131-66-8	5.0	N.E.	N.E.	N.E.	N.E.
Pigment Violet 32	12225-08-0	1.0	N.E.	N.E.	N.E.	N.E.
Solvent Naptha, Light Aromatic	64742-95-6	1.0	N.E.	N.E.	N.E.	N.E.

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: If swallowed, get medical attention.

5. Fire-fighting Measures

Flash Point, °F -156 (Setaflash)

Extinguishing Media: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR!Water spray may be ineffective. Closed containers may explode when exposed to extreme heat due to buildup of steam. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. No unusual fire or explosion hazards noted. Keep containers tightly closed.

SPECIAL FIREFIGHTING PROCEDURES: Full protective equipment including self-contained breathing apparatus should be used. Evacuate area and fight fire from a safe distance. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and launder before reuse. Use only with adequate ventilation. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Avoid contact with eyes, skin and clothing.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials. Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep away from heat, sparks, flame and sources of ignition. Avoid excess heat.

8. Exposure Controls/Personal Protection

ENGINEERING CONTROLS: Use explosion-proof ventilation equipment. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use gloves to prevent prolonged skin contact. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

9. Physical and Chemical Properties

Vapor Density	Heavier than Air	**Odor:**	Solvent Like
Appearance:	Aerosolized Mist	**Evaporation Rate:**	Faster than Ether
Solubility in Water:	Slight	**Freeze Point:**	N.D.
Specific Gravity:	0.813	**pH:**	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120 ° F. Avoid contact with strong acid and strong bases. Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological Information

Chemical Name	LD50	LC50
Liquefied Petroleum Gas	N.E.	N.E.
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Alkyd Resin	N.E.	N.E.
n-Butyl Acetate	13100 mg/kg (Rat, Oral)	2000 ppm (Rat, Inhalation, 4 Hr)
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Barium Sulfate	N.E.	N.E.
Methyl Ethyl Ketone	N.E.	N.E.
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.
Propylene Glycol Monobutyl Ether	2200 mg/kg (Rat, Oral)	N.E.
Pigment Violet 32	>10000 mg/kg (Rat, Oral)	N.E.
Solvent Naptha, Light Aromatic	4700 mg/kg (Rat, Oral)	3670 mg/kg (Rat, Inhalation)

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter waterways, wastewater. soil, storm drains or sewer systems.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)	TDG (Canada)
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Xylene	1330-20-7
Methyl Ethyl Ketone	78-93-3
Ethylbenzene	100-41-4
Aromatic Petroleum Distillates	64742-94-5
Aluminum Oxide	1344-28-1

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b) components exist in this product.

International Regulations:

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

Canadian WHMIS Class: AB5 D2A

16. Other Information

HMIS Ratings:

Health:	2*	**Flammability:**	4	**Physical Hazard:**	0	**Personal Protection:**	X

NFPA Ratings:

Health:	2	**Flammability:**	4	**Instability**	0

VOLATILE ORGANIC COMPOUNDS, g/L: 541

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

1. Identification

Product Name: ROHPER LSPR 6PK GLOSS ALMOND

Revision Date: 12/17/2013

Product Number: V2170838

Product Use/Class: Topcoat/Aerosol

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Prepared by: Regulatory Department

2. Hazard Identification

EMERGENCY OVERVIEW: Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Contents Under Pressure. May cause eye, skin, or respiratory tract irritation. KEEP OUT OF REACH OF CHILDREN. Harmful if inhaled. Harmful if swallowed. Causes eye irritation. Use ventilation necessary to keep exposures below recommended exposure limits, if any. Vapor Harmful. Causes Eye, Skin, Nose, and Throat Irritation.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes Serious Eye Irritation

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May cause skin irritation. Allergic reactions are possible.

EFFECTS OF OVEREXPOSURE - INHALATION: High gas, vapor, mist or dust concentrations may be harmful if inhaled. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC. No significant exposure to Titanium Dioxide is thought to occur during the use of products in which Titanium Dioxide is bound to other materials, such as in paints during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula. (Ref: IARC Monograph, Vol. 93, 2010)Overexposure to methyl ethyl ketone in laboratory animals has been associated with liver abnormalities, kidney and lung damage. Fetotoxic/embryotoxic effects from inhalation have been seen in rats exposed to > 1000ppm during gestation. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Inhalation, Skin Absorption, Skin Contact

3. Composition/Information On Ingredients

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Liquefied Petroleum Gas	68476-86-8	30.0	N.E.	N.E.	N.E.	N.E.
Alkyd Resin	PROPRIETARY	20.0	N.E.	N.E.	N.E.	N.E.
Titanium Dioxide	13463-67-7	15.0	10 mg/m3	N.E.	15 mg/m3 [Total Dust]	N.E.

Acetone	67-64-1	15.0	500 ppm	750 ppm	1000 ppm	N.E.
Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
n-Butyl Acetate	123-86-4	10.0	150 ppm	200 ppm	150 ppm	N.E.
Methyl Ethyl Ketone	78-93-3	10.0	200 ppm	300 ppm	200 ppm	N.E.
Ethylene Glycol Monobutyl Ether	111-76-2	5.0	20 ppm	N.E.	50 ppm	N.E.
Ethylbenzene	100-41-4	5.0	20 ppm	125 ppm	100 ppm	N.E.
Barium Sulfate	7727-43-7	5.0	10 mg/m3	N.E.	15 mg/m3 [Total Dust]	N.E.
Solvent Naptha, Light Aromatic	64742-95-6	1.0	N.E.	N.E.	N.E.	N.E.

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: If swallowed, get medical attention.

5. Fire-fighting Measures

Flash Point, °F -156 (Setaflash)

Extinguishing Media: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR!Water spray may be ineffective. Closed containers may explode when exposed to extreme heat due to buildup of steam. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. No unusual fire or explosion hazards noted. Keep containers tightly closed.

SPECIAL FIREFIGHTING PROCEDURES: Full protective equipment including self-contained breathing apparatus should be used. Evacuate area and fight fire from a safe distance. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and launder before reuse. Use only with adequate ventilation. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Avoid contact with eyes, skin and clothing.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials. Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep away from heat, sparks, flame and sources of ignition. Avoid excess heat.

8. Exposure Controls/Personal Protection

ENGINEERING CONTROLS: Use explosion-proof ventilation equipment. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use gloves to prevent prolonged skin contact. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

9. Physical and Chemical Properties

Vapor Density	Heavier than Air	**Odor:**	Solvent Like
Appearance:	Aerosolized Mist	**Evaporation Rate:**	Faster than Ether
Solubility in Water:	Slight	**Freeze Point:**	ND
Specific Gravity:	0.856	**pH:**	NE
Physical State:	Liquid		

(See section 16 for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120 ° F. Avoid contact with strong acid and strong bases. Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological Information

Chemical Name	LD50	LC50
Liquefied Petroleum Gas	N.E.	N.E.
Alkyd Resin	N.E.	N.E.
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
n-Butyl Acetate	13100 mg/kg (Rat, Oral)	2000 ppm (Rat, Inhalation, 4 Hr)
Methyl Ethyl Ketone	N.E.	N.E.
Ethylene Glycol Monobutyl Ether	1519 mg/kg (Mouse, Oral)	700 ppm (Rat, Inhalation, 7Hr)
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.
Barium Sulfate	N.E.	N.E.
Solvent Naptha, Light Aromatic	4700 mg/kg (Rat, Oral)	3670 mg/kg (Rat, Inhalation)

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter waterways, wastewater. soil, storm drains or sewer systems.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)	TDG (Canada)
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Xylene	1330-20-7
Methyl Ethyl Ketone	78-93-3
Ethylene Glycol Monobutyl Ether	111-76-2
Ethylbenzene	100-41-4
Toluene	108-88-3

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b) components exist in this product.

International Regulations:

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

Canadian WHMIS Class: AB5 D2A

16. Other Information

HMIS Ratings:

Health:	2*	**Flammability:**	4	**Physical Hazard:**	0	**Personal Protection:**	X

NFPA Ratings:

Health:	2	**Flammability:**	4	**Instability**	0

VOLATILE ORGANIC COMPOUNDS, g/L: 544

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

*****MATERIAL SAFETY DATA SHEET*****

For Coatings, Resins and Related Materials

SECTION I-PRODUCT AND PREPARATION INFORMATION

MANUFACTURER: RUST-OLEUM CORPORATION
ADDRESS: 11 Hawthorn Parkway
Vernon Hills, IL
60061

EMERGENCY AND INFORMATION
TELEPHONE: (708)367-7700

PRODUCT CLASS: Aerosol Coating
MANUFACTURERS CODE: V2124, V2133, V2143, V2155, V2163, V2164, V2169, V2171, V2178, V2179, V2182, V2183, V2187, V2190 & V2192
TRADE NAME: HARD HAT Primers and Topcoats (Low VOC)
DATE OF PREPARATION: June 09, 1993 (rwb)

SECTION II-HAZARDOUS INGREDIENTS

INGREDIENT/CAS No	WT %	EXPOSURE LIMITS ACGIH-TLV	OSHA-PEL	LEL	mm Hg@20C
Xylene/1330-20-7	15-40%*	100ppm	100ppm	1.2%	9.5
Toluene/108-88-3	0-15%*	100ppm	100ppm	1.2%	22.0
Methyl ethyl ketone/78-93-3 (MEK)	0-5%*	200ppm	200ppm	2.0%	70.0
Ethylene glycol butyl ether/111-76-2	0-5%*	25ppm	25ppm	1.1%	0.9
Methyl n-amyl ketone/110-43-0	0-15%*	50ppm	100ppm	1.1%	2.1
HiSol 10/64742-95-6	0-10%*	NE	100ppm	1.0%	5.0
EXXATE 600/88230-35-7	0-5%*	NE	NE	1.0%	5.0
Ethyl benzene/100-41-4	1-4%	100ppm	100ppm	1.2%	10.0
Propellant/68476-86-8 (propane, butane, isobutane)	25%*	1000ppm	1000ppm	1.8%	85 psi

* Nearest 5%
NE-not established NA-not applicable

SECTION III-PHYSICAL DATA

Boiling range: Below 0 F
Vapor density: Heavier than air
Evaporation Rate: Slower (Ether=1)
% Volatile: NA (by volume)
Wt/gal: NA
pH: NA

SECTION IV-FIRE AND EXPLOSION HAZARDS

Flammability Classification: Extremely Flammable
Flashpoint: <0 F (TCC)
DOT Classification: Consumer Commodity ORM-D
Extinguishing Media: NFPA Class B extinguishers (Carbon dioxide, dry chemical or foam)

Special Fire Fighting Procedures:
Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion. If water is used, fog nozzles are preferred.

Unusual Fire and Explosion Hazards:
Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Closed containers may explode when exposed to extreme heat. DO NOT apply to hot surfaces.

SECTION V-HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

Acute(Inhalation): Harmful if inhaled. May affect the brain and nervous system causing dizziness, headache or nausea. Repeated overexposures may progressively lead to staggering gait, confusion, unconsciousness or coma. Causes nose and throat irritation.

Acute(Skin or Eye Contact): Causes eye and skin irritation which can lead to dermatitis with repeated overexposures.

Ingestion: gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic:Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to Toluene and Xylene in lab animals has been associated with liver abnormalities, kidney, lung, spleen and eye damage as well as anemia. Effects in humans have included liver and cardiac abnormalities. Ethylene glycol butyl ether may be harmful if absorbed through the skin and has been shown to cause blood abnormalities in lab animals. Overexposure to MEK in lab animals has also been associated with liver abnormalities, kidney and lung damage. Fetotoxic/embryotoxic effects from inhalation have been seen in rats exposed to >1000ppm during gestation.

EMERGENCY AND FIRST AID PROCEDURES:

Inhalation: Remove from exposure, restore breathing and notify a physician.

Eye Contact: Flush immediately with large amounts of water for at least 15 minutes. Notify a physician.

Skin Contact: Wash affected area with soap and water, remove contaminated clothing and wash before reuse.

Ingestion: DO NOT induce vomiting. Keep person warm, quiet and get medical attention. Aspiration of this material into the lungs can cause chemical pneumonitis which can be fatal.

SECTION VI-REACTIVITY DATA

Stability: Stable Incompatible with: strong oxidizing agents

Hazardous Decomposition Products: By open flame- Carbon monoxide & carbon dioxide

Hazardous Polymerization: Will Not Occur

SECTION VII-SPILL OR LEAK PROCEDURES

Release or Spill Procedures: Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools

Waste Disposal Method: Dispose of according to local, state and federal regulations. DO NOT incinerate closed containers.

SECTION VIII-SPECIAL PROTECTION INFORMATION

Respiratory Protection: Use NIOSH approved chemical cartridge respirator (TC23C) to remove solid airborne particles of overspray and organic vapors during spray application. In Confined Areas: Use NIOSH approved supplied-air respirators or hoods (TC19C).

Eye Protection:Use safety eyewear designed to protect against splash of liquids.

Other Protective Equipment:Use impervious gloves/clothing to prevent skin contact.

Ventilation: Provide general dilution or local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits.

SECTION IX-SPECIAL PRECAUTIONS AND REGULATORY ISSUES

Handling and Storage Precautions: Do not store above 120 F. DO NOT puncture or incinerate containers. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.CALIFORNIA PROPOSITION 65 STATEMENT: These products contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	ROHPER LSPR 6PK FLAT HIGH TEMP BLACK	Revision Date:	09/23/2011
Identification Number:	V2176838		
Product Use/Class:	Topcoat/Aerosol		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Liquefied Petroleum Gas	68476-86-8	25.0	N.E.	N.E.	N.E.	N.E.
Toluene	108-88-3	25.0	20 ppm	N.E.	200 ppm	300 ppm
Acetone	67-64-1	15.0	500 ppm	750 ppm	1000 ppm	N.E.
Iron Manganese Oxide	68186-94-7	10.0	10 mg/m3	N.E.	N.E.	N.E.
Mineral Spirits	64742-88-7	10.0	100 ppm	N.E.	100 ppm	N.E.
Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
Magnesium Silicate	14807-96-6	5.0	2 mg/m3	N.E.	0.1 mg/m3 (Respirable)	N.E.
Ethylbenzene	100-41-4	5.0	100 ppm	125 ppm	100 ppm	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Vapors may cause flash fire or explosion. Harmful if swallowed. Extremely flammable liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation. May be absorbed through the skin in harmful amounts.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Avoid breathing vapors or mists. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Harmful if inhaled.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness,

fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F (Setaflash)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

Unusual Fire And Explosion Hazards: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. Keep containers tightly closed. Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Use only in a well-ventilated area. Avoid breathing vapor or mist. Wash thoroughly after handling. Wash hands before eating.

Storage: Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not expose to heat or store above 120 ° F.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

Respiratory Protection: A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Aerosolized Mist	Evaporation Rate:	Faster than Ether
Solubility in H2O:	Slight	Freeze Point:	N.D.
Specific Gravity:	0.822	pH:	N.E.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Liquefied Petroleum Gas	N.E.	N.E.
Toluene	636 mg/kg (Rat, Oral)	>26700 ppm (Rat, Inhalation, 1Hr)
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
Iron Manganese Oxide	>5000 mg/kg (Rat, Oral)	N.E.
Mineral Spirits	>5000 mg/kg (Rat, Oral)	>1400 ppm (Rat, Inhalation, 4Hr)
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Magnesium Silicate	N.E.	TCLo: 11 mg/m3 (Inhalation)
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	UN1950	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	Yes	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD, PRESSURIZED GAS HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS Number
Toluene	108-88-3
Iron Manganese Oxide	68186-94-7
Xylene	1330-20-7
Ethylbenzene	100-41-4

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Siliconized Alkyd Resin	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Siliconized Alkyd Resin	PROPRIETARY

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 4 Physical Hazard: 0 Personal Protection: X

NFPA Ratings:

Health: 2 Flammability: 4 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 587

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

*****MATERIAL SAFETY DATA SHEET*****

For Coatings, Resins and Related Materials

SECTION I-PRODUCT AND PREPARATION INFORMATION

MANUFACTURER: RUST-OLEUM CORPORATION
ADDRESS: 11 Hawthorn Parkway
Vernon Hills, IL
60061

EMERGENCY AND INFORMATION
TELEPHONE: (708)367-7700

PRODUCT CLASS: Aerosol Coating
MANUFACTURERS CODE: V2124, V2133, V2143, V2155, V2163, V2164, V2169, V2171, V2178, V2179, V2182, V2183, V2187, V2190 & V2192
TRADE NAME: HARD HAT Primers and Topcoats (Low VOC)
DATE OF PREPARATION: June 09, 1993 (rwb)

SECTION II-HAZARDOUS INGREDIENTS

INGREDIENT/CAS No	WT %	EXPOSURE LIMITS ACGIH-TLV	OSHA-PEL	LEL	mm Hg@20C
Xylene/1330-20-7	15-40%*	100ppm	100ppm	1.2%	9.5
Toluene/108-88-3	0-15%*	100ppm	100ppm	1.2%	22.0
Methyl ethyl ketone/78-93-3 (MEK)	0-5%*	200ppm	200ppm	2.0%	70.0
Ethylene glycol butyl ether/111-76-2	0-5%*	25ppm	25ppm	1.1%	0.9
Methyl n-amyl ketone/110-43-0	0-15%*	50ppm	100ppm	1.1%	2.1
HiSol 10/64742-95-6	0-10%*	NE	100ppm	1.0%	5.0
EXXATE 600/88230-35-7	0-5%*	NE	NE	1.0%	5.0
Ethyl benzene/100-41-4	1-4%	100ppm	100ppm	1.2%	10.0
Propellant/68476-86-8 (propane, butane, isobutane)	25%*	1000ppm	1000ppm	1.8%	85 psi

* Nearest 5%
NE-not established NA-not applicable

SECTION III-PHYSICAL DATA

Boiling range: Below 0 F
Vapor density: Heavier than air
Evaporation Rate: Slower (Ether=1)
% Volatile: NA (by volume)
Wt/gal: NA
pH: NA

SECTION IV-FIRE AND EXPLOSION HAZARDS

Flammability Classification: Extremely Flammable
Flashpoint: <0 F (TCC)
DOT Classification: Consumer Commodity ORM-D
Extinguishing Media: NFPA Class B extinguishers (Carbon dioxide, dry chemical or foam)

Special Fire Fighting Procedures:
Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion. If water is used, fog nozzles are preferred.

Unusual Fire and Explosion Hazards:
Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Closed containers may explode when exposed to extreme heat. DO NOT apply to hot surfaces.

SECTION V-HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

Acute(Inhalation): Harmful if inhaled. May affect the brain and nervous system causing dizziness, headache or nausea. Repeated overexposures may progressively lead to staggering gait, confusion, unconsciousness or coma. Causes nose and throat irritation.

Acute(Skin or Eye Contact): Causes eye and skin irritation which can lead to dermatitis with repeated overexposures.

Ingestion: gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic:Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to Toluene and Xylene in lab animals has been associated with liver abnormalities, kidney, lung, spleen and eye damage as well as anemia. Effects in humans have included liver and cardiac abnormalities. Ethylene glycol butyl ether may be harmful if absorbed through the skin and has been shown to cause blood abnormalities in lab animals. Overexposure to MEK in lab animals has also been associated with liver abnormalities, kidney and lung damage. Fetotoxic/embryotoxic effects from inhalation have been seen in rats exposed to >1000ppm during gestation.

EMERGENCY AND FIRST AID PROCEDURES:

Inhalation: Remove from exposure, restore breathing and notify a physician.

Eye Contact: Flush immediately with large amounts of water for at least 15 minutes. Notify a physician.

Skin Contact: Wash affected area with soap and water, remove contaminated clothing and wash before reuse.

Ingestion: DO NOT induce vomiting. Keep person warm, quiet and get medical attention. Aspiration of this material into the lungs can cause chemical pneumonitis which can be fatal.

SECTION VI-REACTIVITY DATA

Stability: Stable Incompatible with: strong oxidizing agents

Hazardous Decomposition Products: By open flame- Carbon monoxide & carbon dioxide

Hazardous Polymerization: Will Not Occur

SECTION VII-SPILL OR LEAK PROCEDURES

Release or Spill Procedures: Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools

Waste Disposal Method: Dispose of according to local, state and federal regulations. DO NOT incinerate closed containers.

SECTION VIII-SPECIAL PROTECTION INFORMATION

Respiratory Protection: Use NIOSH approved chemical cartridge respirator (TC23C) to remove solid airborne particles of overspray and organic vapors during spray application. In Confined Areas: Use NIOSH approved supplied-air respirators or hoods (TC19C).

Eye Protection:Use safety eyewear designed to protect against splash of liquids.

Other Protective Equipment:Use impervious gloves/clothing to prevent skin contact.

Ventilation: Provide general dilution or local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits.

SECTION IX-SPECIAL PRECAUTIONS AND REGULATORY ISSUES

Handling and Storage Precautions: Do not store above 120 F. DO NOT puncture or incinerate containers. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.CALIFORNIA PROPOSITION 65 STATEMENT: These products contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

*****MATERIAL SAFETY DATA SHEET*****

For Coatings, Resins and Related Materials

SECTION I-PRODUCT AND PREPARATION INFORMATION

MANUFACTURER: RUST-OLEUM CORPORATION
ADDRESS: 11 Hawthorn Parkway
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INGREDIENT/CAS No	WT %	EXPOSURE LIMITS ACGIH-TLV	OSHA-PEL	LEL	mm Hg@20C
Xylene/1330-20-7	15-40%*	100ppm	100ppm	1.2%	9.5
Toluene/108-88-3	0-15%*	100ppm	100ppm	1.2%	22.0
Methyl ethyl ketone/78-93-3 (MEK)	0-5%*	200ppm	200ppm	2.0%	70.0
Ethylene glycol butyl ether/111-76-2	0-5%*	25ppm	25ppm	1.1%	0.9
Methyl n-amyl ketone/110-43-0	0-15%*	50ppm	100ppm	1.1%	2.1
HiSol 10/64742-95-6	0-10%*	NE	100ppm	1.0%	5.0
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Propellant/68476-86-8 (propane, butane, isobutane)	25%*	1000ppm	1000ppm	1.8%	85 psi

* Nearest 5%
NE-not established NA-not applicable

SECTION III-PHYSICAL DATA

Boiling range: Below 0 F
Vapor density: Heavier than air
Evaporation Rate: Slower (Ether=1)
% Volatile: NA (by volume)
Wt/gal: NA
pH: NA

SECTION IV-FIRE AND EXPLOSION HAZARDS

Flammability Classification: Extremely Flammable
Flashpoint: <0 F (TCC)
DOT Classification: Consumer Commodity ORM-D
Extinguishing Media: NFPA Class B extinguishers (Carbon dioxide, dry chemical or foam)

Special Fire Fighting Procedures:
Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion. If water is used, fog nozzles are preferred.

Unusual Fire and Explosion Hazards:
Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Closed containers may explode when exposed to extreme heat. DO NOT apply to hot surfaces.

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EFFECTS OF OVEREXPOSURE:

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Acute(Skin or Eye Contact): Causes eye and skin irritation which can lead to dermatitis with repeated overexposures.

Ingestion: gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic:Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to Toluene and Xylene in lab animals has been associated with liver abnormalities, kidney, lung, spleen and eye damage as well as anemia. Effects in humans have included liver and cardiac abnormalities. Ethylene glycol butyl ether may be harmful if absorbed through the skin and has been shown to cause blood abnormalities in lab animals. Overexposure to MEK in lab animals has also been associated with liver abnormalities, kidney and lung damage. Fetotoxic/embryotoxic effects from inhalation have been seen in rats exposed to >1000ppm during gestation.

EMERGENCY AND FIRST AID PROCEDURES:

Inhalation: Remove from exposure, restore breathing and notify a physician.

Eye Contact: Flush immediately with large amounts of water for at least 15 minutes. Notify a physician.

Skin Contact: Wash affected area with soap and water, remove contaminated clothing and wash before reuse.

Ingestion: DO NOT induce vomiting. Keep person warm, quiet and get medical attention. Aspiration of this material into the lungs can cause chemical pneumonitis which can be fatal.

SECTION VI-REACTIVITY DATA

Stability: Stable Incompatible with: strong oxidizing agents

Hazardous Decomposition Products: By open flame- Carbon monoxide & carbon dioxide

Hazardous Polymerization: Will Not Occur

SECTION VII-SPILL OR LEAK PROCEDURES

Release or Spill Procedures: Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools

Waste Disposal Method: Dispose of according to local, state and federal regulations. DO NOT incinerate closed containers.

SECTION VIII-SPECIAL PROTECTION INFORMATION

Respiratory Protection: Use NIOSH approved chemical cartridge respirator (TC23C) to remove solid airborne particles of overspray and organic vapors during spray application. In Confined Areas: Use NIOSH approved supplied-air respirators or hoods (TC19C).

Eye Protection:Use safety eyewear designed to protect against splash of liquids.

Other Protective Equipment:Use impervious gloves/clothing to prevent skin contact.

Ventilation: Provide general dilution or local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits.

SECTION IX-SPECIAL PRECAUTIONS AND REGULATORY ISSUES

Handling and Storage Precautions: Do not store above 120 F. DO NOT puncture or incinerate containers. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.CALIFORNIA PROPOSITION 65 STATEMENT: These products contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700

Rust-Oleum Corp.
www.rustoleum.com

1. Identification

Product Name: ROHPER LSPR 6PK GLOSS SAFETY ORANGE

Revision Date: 3/23/2012

Identification Number: V2155838

Product Use/Class: Topcoat/Aerosols

Supplier: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Manufacturer: Rust-Oleum Corporation
11 Hawthorn Parkway
Vernon Hills, IL 60061
USA

Preparer: Regulatory Department

2. Hazard Identification

EMERGENCY OVERVIEW: Harmful if swallowed. Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Contents Under Pressure.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Substance may cause slight skin irritation. Prolonged or repeated contact may cause skin irritation.

EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing vapors or mists. High vapor concentrations are irritating to the eyes, nose, throat and lungs.

EFFECTS OF OVEREXPOSURE - INGESTION: Substance may be harmful if swallowed. Aspiration hazard if swallowed; can enter lungs and cause damage.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Overexposure to methyl ethyl ketone in laboratory animals has been associated with liver abnormalities, kidney and lung damage. Fetotoxic/embryotoxic effects from inhalation have been seen in rats exposed to >1000ppm during gestation. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

3. Composition/Information On Ingredients

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Liquefied Petroleum Gas	68476-86-8	30.0	N.E.	N.E.	N.E.	N.E.
Acetone	67-64-1	25.0	500 ppm	750 ppm	1000 ppm	N.E.
n-Butyl Acetate	123-86-4	10.0	150 ppm	200 ppm	150 ppm	N.E.
Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.
Methyl Ethyl Ketone	78-93-3	5.0	200 ppm	300 ppm	200 ppm	N.E.
Barium Sulfate	7727-43-7	5.0	10 mg/m3	N.E.	15 mg/m3	N.E.
Ethylbenzene	100-41-4	5.0	100 ppm	125 ppm	100 ppm	N.E.
Solvent Naptha, Light Aromatic	64742-95-6	1.0	N.E.	N.E.	N.E.	N.E.

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash with soap and water. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

5. Fire-fighting Measures

Flash Point, °F -156 (Setaflash)

EXTINGUISHING MEDIA: Alcohol Foam, Carbon Dioxide, Dry Chemical, Foam, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Water spray may be ineffective. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can.

SPECIAL FIREFIGHTING PROCEDURES: Evacuate area and fight fire from a safe distance.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Use only in a well-ventilated area. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing vapor or mist.

STORAGE: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F.

8. Exposure Controls/Personal Protection

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

SKIN PROTECTION: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking.

9. Physical and Chemical Properties

Vapor Density	HEAVIER THAN AIR	**Odor:**	Solvent Like
Appearance:	Aerosolized Mist	**Evaporation Rate:**	Faster than ether
Solubility in Water:	Slight	**Freeze Point:**	N.D.
Specific Gravity:	0.792	**pH:**	N.D.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120 ° F. Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological Information

Chemical Name	LD50	LC50
Liquefied Petroleum Gas	N.E.	N.E.
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
n-Butyl Acetate	13100 mg/kg (Rat, Oral)	2000 ppm (Rat, Inhalation, 4 Hr)
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Methyl Ethyl Ketone	N.E.	N.E.
Barium Sulfate	N.E.	N.E.
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.
Solvent Naptha, Light Aromatic	4700 mg/kg (Rat, Oral)	3670 mg/kg (Rat, Inhalation)

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Consumer Commodity	Aerosols	Aerosols
Hazard Class:	ORM-D	2.1	2.1
UN Number:	N.A.	UN1950	UN1950
Packing Group:	N.A.	N.A.	N.A.
Limited Quantity:	No	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA ‘ Hazard Categories ’ promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

SARA SECTION 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

No Sara 313 components exist in this product.

TOXIC SUBSTANCES CONTROL ACT:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

No TSCA 12(b)components exist in this product.

International Regulations:

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

Canadian WHMIS Class: AB5 D2A

16. Other Information

HMIS Ratings:

Health: 2* **Flammability:** 4 **Physical Hazard:** 0 **Personal Protection:** X

NFPA Ratings:

Health: 2 **Flammability:** 4 **Instability** 0

VOLATILE ORGANIC COMPOUNDS, g/L: 532

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name:	WDCARE 1-GL 2PK VARA OILSTN GOLDOAK 227	Revision Date:	09/29/2011
Identification Number:	211681		
Product Use/Class:	Wood Stain/ Varathane		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	Manufacturer:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING
Mineral Spirits	8052-41-3	65.0	100 ppm	N.E.	500 ppm	N.E.
Aromatic Petroleum Distillates	64742-95-6	5.0	N.E.	N.E.	N.E.	N.E.
1,2,4-Trimethylbenzene	95-63-6	5.0	25 ppm	N.E.	N.E.	N.E.

Section 3 - Hazards Identification

*** Emergency Overview ***: Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Harmful if swallowed. Causes eye irritation. Vapors irritating to eyes and respiratory tract. Combustible liquid and vapor.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: May cause skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Harmful if inhaled. May cause headaches and dizziness.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Ingestion, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: 106 F (SCC)

Extinguishing Media: Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

Unusual Fire And Explosion Hazards: Keep containers tightly closed.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Wash hands before eating. Avoid breathing vapor or mist. Avoid contact with eyes. Wash thoroughly after handling. Follow all MSDS/label precautions even after container is emptied because it may retain product residues.

Storage: Keep container closed when not in use. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Keep away from heat, sparks, flame and sources of ignition.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Nitrile or Neoprene gloves may afford adequate skin protection. Use impervious gloves to prevent skin contact and absorption of this material through the skin.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Vapor Density:	Heavier than Air	Odor:	Solvent Like
Appearance:	Liquid	Evaporation Rate:	Slower than Ether
Solubility in H2O:	Slight	Freeze Point:	N.D.
Specific Gravity:	0.840	pH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition, it emits acrid smoke and irritating fumes. By open flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Chemical Name	LD50	LC50
Mineral Spirits	4900 mg/kg (Rat)	>1400 ppm (Rat, 4Hr)
Aromatic Petroleum Distillates	4900 mg/kg (Rat)	N.E.
1,2,4-Trimethylbenzene	N.E.	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)
Proper Shipping Name:	Paint, Not Regulated	Paint	Paint
Hazard Class:	N.A.	3	3
UN Number:	N.A.	UN1263	UN1263
Packing Group:	N.A.	III	III
Limited Quantity:	No	IMDG 34-08, 3.4.7	Yes

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

Chemical Name	CAS Number
Alkyd Resin	PROPRIETARY
Vegetable Oil	8001-22-7
Burnt Umber	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

Chemical Name	CAS Number
Alkyd Resin	PROPRIETARY
Vegetable Oil	8001-22-7

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: B3 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2* Flammability: 2 Physical Hazard: 0 Personal Protection: X

NFPA Ratings:

Health: 2 Flammability: 2 Instability: 0

VOLATILE ORGANIC COMPOUNDS, g/L: 545

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this material safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

Name: Armstrong S-750 Premium Tile Adhesive
Description: Water emulsion latex adhesive

II. DEPARTMENT OF TRANSPORTATION INFORMATION

Shipping name: Not classified Hazard Class: N/A ID #: N/A
EMERGENCY ONLY CONTACT: CHEM-TEL -1-800-255-3924

III. HMIS (0 = minimal hazard; 4 = severe hazard)

Health = 1 Flammability = 0 Reactivity = 0

IV. PRODUCT CONTENT

This product does not contain chemicals subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR 372. All components are on TSCA inventory. This product does NOT contain asbestos.

Armstrong

S-750

Prepared 11/98 – Replaces 1/96

Armstrong World Industries, Inc.
P.O. Box 3209
Lancaster, PA 17604
(717) 396-2328 or (717) 396-2935

V. HAZARDOUS INGREDIENTS

(Chemical Identity; Common Name)	C.A.S. No.	%	OSHA PEL	ACGIH TLV
None	N/A	N/A	N/A	N/A

VI. PHYSICAL DATA

APPEARANCE: Light tan, creamy paste. BOILING POINT (degrees F): 212˚F. VAPOR PRESSURE (mm Hg @ 20 degrees C): N/K. VAPOR DENSITY (Air = 1): N/K. PERCENT VOLATILE BY WEIGHT (30 min. @ 275 degrees F): 38. EVAPORATION RATE (Butyl Acetate = 1): Slower. WT/GAL (Water = 8.3): 9.46 lb. SOLUBILITY IN WATER: Disperses if wet. SPECIFIC GRAVITY (H_20 =1): 1.14. VOC: 5 g/l calculated at 70˚F/21˚C, SCAQMD. pH: 9.7.

VII. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method): None. FLAMMABLE RANGE: LEL = N/A; UEL: N/A. EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, or water spray. SPECIAL FIRE FIGHTING PROCEDURES: Protect fire fighters from toxic products of combustion by wearing self-contained breathing apparatus. UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers in a fire may rupture due to pressure build-up; use water to cool containers to prevent this.

VIII. HEALTH HAZARD DATA

PRIMARY ROUTE(S) OF ENTRY: N/A. TARGET ORGANS: N/A. EFFECTS OF OVEREXPOSURE: SKIN AND EYES: May produce slight transient irritation to the eyes and skin. INHALATION: N/A. CARCINOGENICITY: NTP: No; IARC Monographs: No; OSHA Regulated: No. MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: None. FIRST AID PROCEDURES: SKIN AND EYES: Flush any eye contact with plenty of water. With skin contact, wash with soap and water. Refer to physician if irritation or symptoms persist. INHALATION: N/A.

IX. REACTIVITY DATA

STABILITY: Stable. INCOMPATIBILITY: Strong oxidizing agents. HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, and other toxic vapors and gases that are common to thermal degradation or organic compounds. HAZARDOUS POLYMERIZATION: Will not occur.

X. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spill, preventing it from entering sewer lines or waterways. Use absorbent to assist with the pick-up of material. Scrape up product and place into container. Residual of product, while still wet, can be cleaned up with warm soapy water. WASTE DISPOSAL METHOD: Dispose of container and any unused contents in accordance with Federal, State and Local Waste Disposal Regulations. Do not flush unused contents or residue down drains. Do not reuse container.

XI. SAFE HANDLING AND USE INFORMATION

VENTILATION: Normal, ambient ventilation should be sufficient. RESPIRATORY PROTECTION: Should not be required. SKIN AND EYE PROTECTION: It is always a good safety practice to avoid contact with eyes and prolonged contact with skin. Use spectacle-type glasses and latex or rubber gloves to avoid contact.

XII. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Keep from freezing. Recommended storage temperature is below 90˚F. OTHER PRECAUTIONS: None. WORK SITE ENVIRONMENT: Initially there may be a potential adverse impact on indoor air quality within the general work area during the installation process. Therefore you should advise the building manager or other appropriate person that: • It will be necessary to establish and maintain adequate ventilation of the work area, without causing the entry of contaminants to other parts of building; and • Persons who are sensitive to odors and/or chemicals should be advised to avoid the work area during this process.

The information presented herein is supplied as a guide to those who handle or use this product. Safe work practices must be employed when working with any materials. It is important that the end user makes a determination regarding the adequacy of the safety procedures employed during the use of this product.

N/A – not applicable or not available
N/K – none known or not known

SAFETY-KLEEN 105 SOLVENT VIRGIN
MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: SAFETY-KLEEN 105 SOLVENT VIRGIN

SYNONYMS: Parts Washer Solvent; Petroleum Distillates; Petroleum Naphtha; Naphtha, Solvent; Stoddard Solvent; Mineral Spirits.

PRODUCT CODE: 6610, 1011614, 1014614

PRODUCT USE: Cleaning and degreasing metal parts.
If this product is used in combination with other products, refer to the Material Safety Data Sheet for those products.

This number is for emergency use only. If you desire non-emergency product information, please call a phone number listed below.

24-HOUR EMERGENCY PHONE NUMBER MEDICAL AND TRANSPORTATION (SPILL):

1-800-468-1760

SUPPLIER: Safety-Kleen Systems, Inc.
5400 Legacy Drive
Cluster II, Building 3
Plano, Texas 75024
USA
1-800-669-5740
www.Safety-Kleen.com

TECHNICAL INFORMATION: 1-800-669-5740 Press 1 then 1, then Extension 7500

MSDS FORM NUMBER: 82341 **ISSUE:** May 1, 2007

ORIGINAL ISSUE: February 13, 1991 **SUPERSEDES:** August 11, 2005

PREPARED BY: Product MSDS Coordinator **APPROVED BY:** MSDS Task Force

SECTION 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

APPEARANCE
Liquid, clear, colorless or green, mild hydrocarbon odor.

WARNING!

PHYSICAL HAZARDS
Combustible liquid and vapor.

HEALTH HAZARDS
May be harmful if inhaled.
May be harmful if swallowed.
May irritate the respiratory tract (nose, throat, and lungs), eyes, and skin.
Contains material that may cause central nervous system and kidney damage.

ENVIRONMENTAL HAZARDS
Toxic to fish.

OSHA Regulated Chemicals
No information is available.

POTENTIAL HEALTH EFFECTS

INHALATION (BREATHING): High concentrations of vapor may be harmful if inhaled. High concentrations of vapor or mist may irritate the respiratory tract (nose, throat, and lungs). High concentrations of vapor or mist may cause nausea, vomiting, headaches, dizziness, loss of coordination, numbness, and other central nervous system effects. Massive acute overexposure may cause rapid central nervous system depression, sudden collapse, coma, and/or death.

EYES: May cause irritation.

SKIN: May cause irritation. Not likely to be absorbed in harmful amounts.

INGESTION (SWALLOWING): May be harmful if swallowed. May cause throat irritation, nausea, vomiting, and diarrhea. Breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Individuals with pre-existing respiratory tract (nose, throat, and lungs), central nervous system, kidney, eye, and/or skin disorders may have increased susceptibility to the effects of exposure.

CHRONIC: Prolonged or repeated inhalation may cause toxic effects as noted under **INHALATION (BREATHING)**. Prolonged or repeated exposure may cause central nervous system and kidney damage. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis).

CANCER INFORMATION: No known carcinogenicity. For more information, see **SECTION 11: CARCINOGENICITY**.

Also see **SECTION 15: CALIFORNIA**.

POTENTIAL ENVIRONMENTAL EFFECTS
Product is toxic to fish. Also see **SECTION 12: ECOLOGICAL INFORMATION**.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Component	Synonym	Percent
64742-47-8	Distillates (petroleum), hydrotreated light	N.Av.	100

SECTION 4: FIRST AID MEASURES

INHALATION (BREATHING): Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Oxygen should only be administered by qualified personnel. Someone should stay with victim. Get medical attention if breathing difficulty persists.

EYES: If irritation or redness from exposure to vapor develops, move away from exposure into fresh air. Upon contact, immediately flush eyes with plenty of lukewarm water, holding eyelids apart, for 15 minutes. Get medical attention.

SKIN: Remove affected clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if irritation or pain develops or persists.

INGESTION (SWALLOWING): Do NOT induce vomiting. Immediately get medical attention. Call 1-800-669-5740 for additional information. If spontaneous vomiting occurs, keep head below hips to avoid breathing the product into the lungs. Never give anything by mouth to an unconscious person.

NOTE TO PHYSICIANS: Treat symptomatically and supportively. Treatment may vary with condition of victim and specifics of incident. Call 1-800-669-5740 for additional information.

SECTION 5: FIRE FIGHTING MEASURES

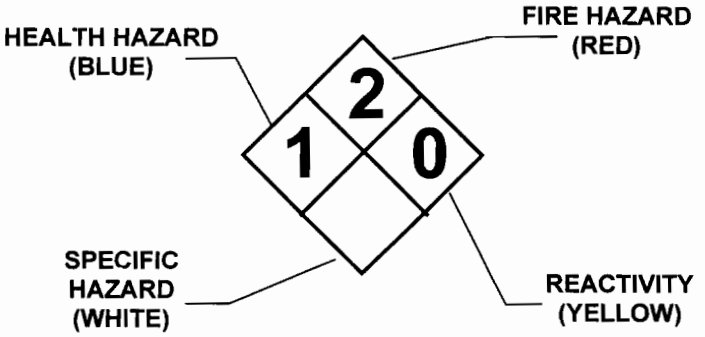
HAZARDOUS COMBUSTION PRODUCTS: Decomposition and combustion materials may be toxic. Burning may produce carbon monoxide and unidentified organic compounds.

CONDITIONS OF FLAMMABILITY: Heat, sparks, or flame.

PROTECTIVE EQUIPMENT FOR FIREFIGHTERS: A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

EXTINGUISHING MEDIA: Carbon dioxide, regular foam, dry chemical, water spray, or water fog.

NFPA 704 HAZARD IDENTIFICATION: This information is intended solely for the use by individuals trained in this system.



FIRE FIGHTING INSTRUCTIONS: Keep storage containers cool with water spray.

FIRE AND EXPLOSION HAZARDS: Vapor explosion hazard indoors, outdoors, or in sewers. Vapors may travel to ignition source and flashback. Vapors will spread along the ground and collect in low or confined areas. Run-off to sewer may create a fire hazard. Heated containers may rupture or be thrown into the air. "Empty" containers may retain residue and can be dangerous. Product is not sensitive to mechanical impact. Product may be sensitive to static discharge, which could result in fire or explosion.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Remove all ignition sources. Do not touch or walk through spilled product. Stop leak if you can do it without risk. Wear protective equipment and provide engineering controls as specified in **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. A vapor suppressing foam may be used to reduce vapors. Contain spill away from surface water and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean, sparkproof tool into a sealable container for disposal.

Additionally, for large spills: Water spray may reduce vapor, but may not prevent ignition in closed spaces. Dike far ahead of liquid spill for collection and later disposal.

SECTION 7: HANDLING AND STORAGE

HANDLING: Keep away from heat, sparks, or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean, sparkproof tools and explosion-proof equipment. When transferring product, metal containers, including trucks and tank cars, should be grounded and bonded. Do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing, and shoes. Do not smoke while using this product.

SHIPPING AND STORING: Keep container tightly closed when not in use and during transport. Store containers in a cool, dry place. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Keep containers away from heat, flame, sparks, static electricity, or other sources of ignition. Empty product containers may retain product residue and can be dangerous. See **SECTION 14: TRANSPORTATION INFORMATION** for Packing Group information.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES:

Component Exposure Limits

Distillates (petroleum), hydrotreated light (64742-47-8)

ACGIH:	100 ppm TWA (related to Stoddard solvent)
OSHA:	100 ppm TWA; 525 mg/m3 TWA (related to Stoddard solvent)
NIOSH:	350 mg/m3 TWA (related to Stoddard solvent) 1800 mg/m3 Ceiling (15 min) (related to Stoddard solvent)

ENGINEERING CONTROLS: Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below applicable exposure limits. Where explosive mixtures may be present, equipment safe for such locations should be used.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION: Use NIOSH-certified P- or R- series particulate filter and organic vapor cartridges when concentration of vapor or mist exceeds applicable exposure limits. Protection provided by air purifying respirators is limited. Do not use N-rated respirators. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4.

EYE PROTECTION: Where eye contact is likely, wear chemical goggles; contact lens use is not recommended.

SKIN PROTECTION: Where skin contact is likely, wear neoprene, nitrile, or equivalent protective gloves; use of natural rubber or equivalent gloves is not recommended.

To avoid prolonged or repeated contact with product where spills and splashes are likely, wear appropriate chemical-resistant faceshield, boots, apron, coveralls, long sleeve shirts, or other protective clothing.

PERSONAL HYGIENE: Use good personal hygiene. Wash thoroughly with soap and water after handling product and before eating, drinking, or using tobacco products. Clean affected clothing, shoes, and protective equipment before reuse. Discard affected clothing, shoes, and/or protective equipment if they cannot be thoroughly cleaned. Discard leather articles, such as shoes, saturated with this product.

OTHER PROTECTIVE EQUIPMENT: Where spills and splashes are likely, facilities storing or using this product should be equipped with an emergency eyewash and shower, both equipped with clean water, in the immediate work area.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE, APPEARANCE, AND ODOR:	Liquid, clear, colorless or green, mild hydrocarbon odor.
ODOR THRESHOLD:	30 ppm (based on Stoddard Solvent)
MOLECULAR WEIGHT:	Not available.
SPECIFIC GRAVITY:	0.77 to 0.80 at 60°F (15.6°C) (water = 1)
DENSITY:	6.4 to 6.7 LB/US gal (770 to 800 g/l)
VAPOR DENSITY:	5 (air = 1) (approximately)
VAPOR PRESSURE:	0.6 mm Hg at 68°F (20°C) (approximately) 1.0 mm Hg at 100°F (37°C) (approximately)
BOILING POINT:	310°F (155°C) (initial)
FREEZING/MELTING POINT:	Not Available
pH:	Not applicable.
EVAPORATION RATE:	0.1 (butyl acetate = 1) (based on Stoddard Solvent)
SOLUBILITY IN WATER:	Insoluble.
FLASH POINT:	105°F (40°C) Tag Closed Cup (minimum)
FLAMMABLE LIMITS IN AIR:	**LOWER:** 0.7 VOL% (minimum) **UPPER:** 5 VOL% (maximum)
AUTOIGNITION TEMPERATURE:	410°F (210°C) (minimum)
% VOLATILE:	Negligible

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under normal temperatures and pressures.

CONDITIONS TO AVOID: Avoid heat, sparks, or flame and incompatible materials.

INCOMPATIBILITY: Avoid acids, alkalies, oxidizing agents, reducing agents, or reactive halogens.

REACTIVITY: Polymerization is not known to occur under normal temperature and pressures. Not reactive with water.

HAZARDOUS DECOMPOSITION PRODUCTS: None under normal temperatures and pressures. See also **SECTION 5: HAZARDOUS COMBUSTION PRODUCTS**.

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICITY DATA:

Component Analysis - LD50/LC50
Distillates (petroleum), hydrotreated light (64742-47-8)
Inhalation LC50 Rat: >5.2 mg/L/4H
Oral LD50 Rat: >5000 mg/kg
Dermal LD50 Rabbit: >2000 mg/kg

ACUTE EFFECTS: May irritate the respiratory tract (nose, throat, and lungs), eyes, and skin. May be harmful if swallowed. Breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death. High concentrations of vapor or mist may cause nausea, vomiting, headaches, dizziness, loss of coordination, numbness, and other central nervous system effects. Massive acute overexposure may cause rapid central nervous system depression, sudden collapse, coma, and/or death.

REPEATED DOSE EFFECTS: Based on best current information, there is no known human sensitization associated with this product.

Based on best current information, there is no known mutagenicity associated with this product.

Based on best current information, there is no known reproductive toxicity associated with this product. Also see **SECTION 15: CALIFORNIA**.

CARCINOGENICITY: Based on best current information for the components in **Section 2**, there is no known carcinogenicity as categorized by ACGIH A1 or A2 substances; as categorized by IARC Group 1, Group 2A, or Group 2B agents; or as listed by NTP as either known carcinogens or substances for which there is limited evidence of carcinogenicity in humans or sufficient evidence of carcinogenicity in experimental animals.

Also see **SECTION 15: CALIFORNIA**.

TARGET ORGAN EFFECTS: Prolonged or repeated exposure may cause central nervous system and kidney damage.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: 2.9 mg/L 96 hour LC_{50} Rainbow trout, Donaldson trout (Oncorhynchus mykiss) (based on Petroleum distillates, hydrotreated light).
Component Analysis - Ecotoxicity - Aquatic Toxicity

Distillates (petroleum), hydrotreated light (64742-47-8)

Test & Species		Conditions
96 Hr LC50 Pimephales promelas	45 mg/L	flow-through
96 Hr LC50 Lepomis macrochirus	1740 mg/L	static

PERSISTENCE/DEGRADABILITY: No information available for the product.

BIOACCUMULATION/ACCUMULATION: No information available for the product.

MOBILITY IN ENVIRONMENTAL MEDIA: No information available for the product.

OTHER ADVERSE EFFECTS: Product is toxic to fish. Also see **SECTION 12: ECOLOGICAL INFORMATION**.

OCTANOL/WATER PARTITION COEFFICIENT: Not available.

VOLATILE ORGANIC COMPOUNDS: 100 WT%; 6.4 to 6.7 LB/US gal; 770 to 800 g/l
As per 40 CFR Part 51.100(s).

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL: Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding proper recycling or disposal.

USEPA WASTE CODE(S): D001, D018
Based on available data, this information applies to the product as supplied to the user. Processing, use, or contamination by the user may change the waste code applicable to the disposal of this product.

SECTION 14: TRANSPORT INFORMATION

DOT:
Shipping Name: PETROLEUM DISTILLATES, N.O.S. (petroleum naphtha)
UN/NA #: UN1268 **Hazard Class:** 3 **Packing Group:** III
Required Label(s): FLAMMABLE LIQUID

TDG:
Shipping Name: PETROLEUM DISTILLATES, N.O.S.
UN/NA #: UN1268 **Hazard Class:** 3 **Packing Group:** III
Required Label(s): Flammable

EMERGENCY RESPONSE GUIDE NUMBER: 128
Reference *North American Emergency Response Guidebook*

SECTION 15: REGULATORY INFORMATION

USA REGULATIONS

SARA SECTIONS 302 AND 304: Based on the ingredient listed in **SECTION 2**, this product does not contain any "extremely hazardous substances" listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B.

SARA SECTIONS 311 AND 312: This product poses the following health hazards as defined in 40 CFR Part 370 and is subject to the requirements of sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA):

Immediate (Acute) Health Hazard
Delayed (Chronic) Health Hazard
Fire Hazard

SARA SECTION 313:	This product does not contain "toxic" chemicals subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.
CERCLA:	Based on the ingredient listed in **SECTION 2**, this product does not contain any "hazardous substances" listed pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4.
TSCA:	All the components of this product are listed on, or are automatically included as "naturally occurring chemical substances" on, or are exempted from the requirement to be listed on, the TSCA Inventory.
CALIFORNIA:	This product may contain a detectable amount of benzene CAS 71-43-2. WARNING: This chemical is known to the State of California to cause cancer. This product may contain a detectable amount of benzene CAS 71-43-2 and toluene CAS 108-88-3. WARNING: These chemicals are known to the State of California to cause birth defects or other reproductive harm.

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all information required by the CPR.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA):	The components of this product are listed on, or are automatically included as "substance occurring in nature" on, or are exempted from the requirements to be listed on, the Canadian Domestic Substances List (DSL).

SECTION 16. OTHER INFORMATION

REVISION INFORMATION:	Regulatory Update. Regulatory update, updated to ANSI Z400.1-2004 format. This MSDS has been revised in the following sections: Section 1 (Dates), Section 2 (Composition updated), Section 3 (switched to Emergency Overview), Section 4 (Phone Numbers), Section 5 (Fire Fields), Section 8 (Exposure Limits added), Section 11 (Toxicology fields updated), Section 12 (Ecotoxicity , fields updated), Section 16 (Revision Information).

LABEL/OTHER INFORMATION: This product is United States Department of Agriculture (USDA) approved and ETL.

User assumes all risks incident to the use of this (these) product(s). To the best of our knowledge, the information contained herein is accurate. However, Safety-Kleen assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either express or implied, or merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to information or the product to which information refers. The data contained on this sheet apply to the product(s) as supplied to the user.

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SAFETY DATA SHEET

Section 1: IDENTIFICATION

1.1 PRODUCT IDENTIFIER

Product Name: Sakrete High Strength Concrete Mix

1.2 RECOMMENDED USE OF CHEMICAL AND RESTRICTIONS ON USE

Use: Various.

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Name/Address: Sakrete of North America
8201 Arrowridge Blvd.
Charlotte, NC
28273

Telephone Number: 866-725-7383

1.4 EMERGENCY TELEPHONE NUMBER

Emergency Telephone Number: CHEMTREC 800-424-9300
INTERNATIONAL + 01-703-527-3887

Date of Preparation: July 19, 2013 **Version #:** 1.0

Section 2: HAZARD(S) IDENTIFICATION

2.1 CLASSIFICATION OF THE CHEMICAL ACCORDING TO OSHA HAZCOM 2012

Hazard class

Acute toxicity 4 (Oral)
Skin irritation 2
Serious eye damage 1
Skin sensitization 1
Carcinogenicity 1A
Specific target organ toxicity - Repeated exposure 1

2.2 LABEL ELEMENTS ACCORDING TO OSHA HAZCOM 2012

Hazard Pictogram:

Signal Word: Danger

Hazard Statement: Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. May cause cancer. Causes damage to lungs through prolonged or repeated exposure.

Prevention: Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. Do not breathe dust.

SAFETY DATA SHEET

Response: If swallowed: Immediately call a poison center/doctor. Rinse mouth. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If on skin: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention. If exposed or concerned: Get medical advice/attention.

Storage: Store locked up.

Disposal: Dispose of contents and container in accordance with all local, regional, national and international regulations.

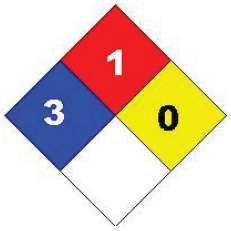
2.3 ADDITIONAL INFORMATION

Hazards not otherwise classified: Not applicable.

8 % of the mixture consists of ingredient(s) of unknown acute toxicity.

This product is a hazardous chemical as defined by NOM-018-STPS-2000.

Mexico Classification:



Blue = Health **Red = Flammability** **Yellow = Reactivity** **White = Special**

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

WHMIS Classification(s):

Class D2A - Carcinogenicity
Class D2A - Chronic Toxic Effects
Class E - Corrosive Material

WHMIS Hazard Symbols:

WHMIS Signal Word: DANGER

SAFETY DATA SHEET

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 MIXTURES

Ingredient	UN #	H / F/ R / *	CAS No	Wt. %
Silica, crystalline, quartz	Not available.	2/0/0	14808-60-7	60 - 100
Portland cement	Not available.	2/0/0	65997-15-1	7 - 13
Ashes (residues)	Not available.	Not available.	68131-74-8	1 - 5
Ferric oxide	Not available.	1/0/0	1309-37-1	1 - 5
Calcium carbonate	Not available.	1/0/0	1317-65-3	0.1 - 1

The exact percentage (concentration) of chemicals has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

* Per NOM-018-STPS-2000

Section 4: FIRST- AID MEASURES

4.1 DESCRIPTION OF THE FIRST AID MEASURE

Eye: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get medical attention immediately.

Skin: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.

Inhalation: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Eye: Causes serious eye damage. May cause burns in the presence of moisture. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Skin: Causes skin irritation. May cause burns in the presence of moisture. Skin contact during hydration may slowly develop sufficient heat that may cause severe burns possibly resulting in permanent injury. Do not allow product to harden around any body part or allow continuous, prolonged contact with skin. Handling can cause dry skin. May cause sensitization by skin contact.

Inhalation: May cause respiratory tract irritation.

Ingestion: Harmful if swallowed. May cause stomach distress, nausea or vomiting.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENTS NEEDED

Note to Physicians: Symptoms may not appear immediately.

Specific Treatments: In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SAFETY DATA SHEET

Section 5: FIRE-FIGHTING MEASURES

5.1 FLAMMABILITY

Flammability: Not flammable by WHMIS/OSHA criteria.

5.2 EXTINGUISHING MEDIA

Suitable Extinguishing Media: Treat for surrounding material.

Unsuitable Extinguishing Media: Not available.

5.3 SPECIAL HAZARDS ARISING FROM THE CHEMICAL

Products of Combustion: May include, and are not limited to: oxides of carbon.

Explosion Data:

Sensitivity to Mechanical Impact: Not available.

Sensitivity to Static Discharge: Not available.

5.4 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHTERS

Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

Section 6: ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.2 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING - UP

Methods for Containment: Contain spill, then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for Cleaning-Up: Vacuum or sweep material and place in a disposal container.

Section 7: HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING

Handling: Avoid contact with skin and eyes. Do not swallow. Good housekeeping is important to prevent accumulation of dust. Avoid generating and breathing dust. The use of compressed air for cleaning clothing, equipment, etc, is not recommended. Handle and open container with care. When using do not eat or drink. Wash hands before eating, drinking, or smoking. (See section 8)

General Hygiene Advice: Launder contaminated clothing before reuse. Wash hands before eating, drinking, or smoking.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Storage: Keep out of the reach of children. Store in dust-tight, dry, labeled containers. Keep containers closed when not in use. Avoid any dust buildup by frequent cleaning and suitable construction of the storage area. Do not store in an area equipped with emergency water sprinklers. (See section 10)

SAFETY DATA SHEET

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

Exposure Guidelines

Occupational Exposure Limits		
Ingredient	**OSHA-PEL**	**ACGIH-TLV**
Silica, crystalline, quartz	((10 mg/m^3)/(%SiO_2+2) TWA (resp)); ((30 mg/m^3)/(%SiO_2+2) TWA (total)); ((250)/(%SiO_2+5) mppcf TWA (resp))	0.025 mg/m³
Portland cement	15 mg/m³ (total); 5 mg/m³ (resp)	1 mg/m³ (no asbestos and <1% crystalline silica, respirable fraction)
Ashes (residues)	Not available.	Not available.
Ferric oxide	10 mg/m^3	5 mg/m^3 (iron oxide fume; dust as Fe)
Calcium carbonate	15 mg/m³ (total); 5 mg/m³ (resp)	10 mg/m³

8.2 EXPOSURE CONTROLS

Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

8.3 INDIVIDUAL PROTECTIVE MEASURES

Personal Protective Equipment:

Eye/Face Protection: Wear approved eye (properly fitted dust- or splash-proof chemical safety goggles) / face (face shield) protection.

Skin Protection:

Hand Protection: Wear suitable waterproof gloves.

Body Protection: Wear suitable waterproof protective clothing.

Respiratory Protection: A NIOSH approved dust mask or filtering facepiece is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2).

General Health and Safety Measures: Handle according to established industrial hygiene and safety practices. Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Powder.

Color: Various.

Odor: Characteristic.

Odor Threshold: Not available.

Physical State: Solid.

pH:	12 - 13
Melting Point/Freezing Point:	Not available.
Initial Boiling Point and Boiling Range:	Not available.
Flash Point:	Not available.
Evaporation Rate:	Not available.
Flammability:	Not Flammable.
Lower Flammability/Explosive Limit:	Not available.
Upper Flammability/Explosive Limit:	Not available.
Vapor Pressure:	Not available.
Vapor Density:	Not available.
Relative Density/Specific Gravity:	Not available.
Solubility:	Not available.
Partition coefficient: n-octanol/water:	Not available.
Auto-ignition Temperature:	Not available.
Decomposition Temperature:	Not available.
Viscosity:	Not available.
Oxidizing Properties:	Not available.
Explosive Properties:	Not available.

Section 10: STABILITY AND REACTIVITY

10.1 REACTIVITY

No dangerous reaction known under conditions of normal use.

10.2 CHEMICAL STABILITY

Stable under normal storage conditions. Keep dry in storage.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

No dangerous reaction known under conditions of normal use.

10.4 CONDITIONS TO AVOID

Incompatible materials. Moisture.

10.5 INCOMPATIBLE MATERIALS

Wet cement is alkaline and incompatible with acid, ammonium salts and aluminum metal.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

May include, and are not limited to: oxides of carbon.

Section 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

Likely Routes of Exposure: Skin contact, skin absorption, eye contact, inhalation, and ingestion.

Symptoms related to physical/chemical/toxicological characteristics:

Eye: Causes serious eye damage. May cause burns in the presence of moisture. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Skin: Causes skin irritation. May cause burns in the presence of moisture. Skin contact during hydration may slowly develop sufficient heat that may cause severe burns possibly resulting in permanent injury. Do not allow product to harden around any body part or allow continuous, prolonged contact with skin. Handling can cause dry skin. May cause sensitization by skin contact.

Ingestion: Harmful if swallowed. May cause stomach distress, nausea or vomiting.

Inhalation: May cause respiratory tract irritation.

Acute Toxicity:

Ingredient	IDLH	LC50	LD50
Silica, crystalline, quartz	Not available.	Not available.	Oral 500 mg/kg, rat
Portland cement	Not available.	Not available.	Not available.
Ashes (residues)	Not available.	Not available.	Oral >2000 mg/kg, rat
Ferric oxide	Not available.	Not available.	Oral >10000 mg/kg, rat
Calcium carbonate	Not available.	Not available.	Oral 6450 mg/kg, rat

Calculated overall Chemical Acute Toxicity Values		
LC50 (inhalation)	**LD50 (oral)**	**LD50 (dermal)**
Not available.	525 mg/kg, rat	Not available.

Ingredient	Chemical Listed as Carcinogen or Potential Carcinogen (NTP, IARC, OSHA, ACGIH, CP65)*
Silica, crystalline, quartz	G-A2, I-1, N-1, O, CP65
Portland cement	G-A4
Ashes (residues)	Not listed.
Ferric oxide	G-A4, I-3
Calcium carbonate	Not listed.

11.2 DELAYED, IMMEDIATE, AND CHRONIC EFFECTS OF SHORT- AND LONG-TERM EXPOSURE

Skin Corrosion/Irritation: Causes skin irritation. May cause burns in the presence of moisture.

Serious Eye Damage/Irritation: Causes serious eye damage. May cause burns in the presence of moisture.

Respiratory Sensitization: Based on available data, the classification criteria are not met.

Skin Sensitization: May cause an allergic skin reaction.

STOT-Single Exposure: Based on available data, the classification criteria are not met.

Chronic Health Effects: Respirable crystalline silica in the form of quartz or cristobalite from occupational sources is listed by the International Agency for Research on Cancer (IARC) and National Toxicology Program (NTP) as a lung carcinogen. Prolonged exposure to respirable crystalline silica has been known to cause silicosis, a lung disease, which may be disabling. While there may be a factor of individual susceptibility to a given exposure to respirable silica dust, the risk of contracting silicosis and the

severity of the disease is clearly related to the amount of dust exposure and the length of time (usually years) of exposure.

Carcinogenicity: May cause cancer.

Germ Cell Mutagenicity: This product is not classified as a mutagen.

Reproductive Toxicity:

Developmental: Based on available data, the classification criteria are not met.

Teratogenicity: Not hazardous by WHMIS criteria.

Embryotoxicity: Not hazardous by WHMIS criteria.

Fertility: Based on available data, the classification criteria are not met.

STOT-Repeated Exposure: Causes damage to organs through prolonged or repeated exposure.

Aspiration Hazard: Based on available data, the classification criteria are not met.

Toxicologically Synergistic Materials: Not available.

Other Information: Not available.

Section 12: ECOLOGICAL INFORMATION

12.1 ECOTOXICITY

Acute/Chronic Toxicity: No ecological consideration when used according to directions. Normal dilution of this product to drains, sewers, septic systems and treatment plants is not considered environmentally harmful.

12.2 PERSISTENCE AND DEGRADABILITY

Not available.

12.3 BIOACCUMULATIVE POTENTIAL

Bioaccumulation: Not available.

12.4 MOBILITY IN SOIL

Not available.

12.5 OTHER ADVERSE EFFECTS

Not available.

Section 13: DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

Disposal Method: This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

Other disposal recommendations: Not available.

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Section 14: TRANSPORT INFORMATION

14.1 UN NUMBER

DOT	TDG	NOM-004-SCT2-1994
Not regulated.	Not regulated.	Not regulated.

14.2 UN PROPER SHIPPING NAME

DOT	TDG	NOM-004-SCT2-1994
Not applicable.	Not applicable.	Not applicable.

14.3 TRANSPORT HAZARD CLASS (ES)

DOT	TDG	NOM-004-SCT2-1994
Not applicable.	Not applicable.	Not applicable.

14.4 PACKING GROUP

DOT	TDG	NOM-004-SCT2-1994
Not applicable.	Not applicable.	Not applicable.

14.5 ENVIRONMENTAL HAZARDS

Not available.

14.6 TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE

Not available.

14.7 SPECIAL PRECAUTIONS FOR USER

Do not handle until all safety precautions have been read and understood.

Section 15: REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/ LEGISLATIONS SPECIFIC FOR THE CHEMICAL

Canada: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

US: MSDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012

Mexico: MSDS prepared pursuant to NOM-018-STPS-2000.

SARA Title III				
Ingredient	**Section 302 (EHS) TPQ (lbs.)**	**Section 304 EHS RQ (lbs.)**	**CERCLA RQ (lbs.)**	**Section 313**
Silica, crystalline, quartz	Not listed.	Not listed.	Not listed.	Not listed.
Portland cement	Not listed.	Not listed.	Not listed.	Not listed.
Ashes (residues)	Not listed.	Not listed.	Not listed.	Not listed.
Ferric oxide	Not listed.	Not listed.	Not listed.	Not listed.
Calcium carbonate	Not listed.	Not listed.	Not listed.	Not listed.

SAFETY DATA SHEET

State Regulations

California Proposition 65:

This product contains Crystalline Silica, Quartz and may also contain trace amounts of other chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Global Inventories:

Ingredient	Canada DSL/NDSL	USA TSCA
Silica, crystalline, quartz	DSL	Yes.
Portland cement	DSL	Yes.
Ashes (residues)	DSL	Yes.
Ferric oxide	DSL	Yes.
Calcium carbonate	NDSL	Yes.

NFPA-National Fire Protection Association:	
Health:	3
Fire:	1
Reactivity:	0

HMIS-Hazardous Materials Identification System:	
Health:	3*
Fire:	1
Physical Hazard:	0

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

CP65 **California Proposition 65**

OSHA (O) **Occupational Safety and Health Administration.**

ACGIH (G) **American Conference of Governmental Industrial Hygienists.**
A1 - Confirmed human carcinogen.
A2 - Suspected human carcinogen.
A3 - Animal carcinogen.
A4 - Not classifiable as a human carcinogen.
A5 - Not suspected as a human carcinogen.

IARC (I) **International Agency for Research on Cancer.**
1 - The agent (mixture) is carcinogenic to humans.
2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

NTP (N) **National Toxicology Program.**
1 - Known to be carcinogens.
2 - Reasonably anticipated to be carcinogens.

SAFETY DATA SHEET

Section 16: OTHER INFORMATION

Date of Preparation: July 19, 2013

Expiry Date: July 19, 2016

Version: 1.0

Revision Date: July 17, 2014

Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

Prepared by: Nexreg Compliance Inc.
Phone: (519) 488-5126
www.nexreg.com

Prepared for: Sakrete of North America

End of Safety Data Sheet

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 677.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

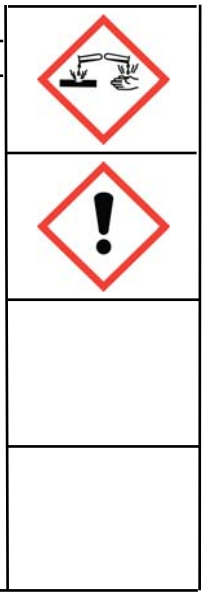
Salicylic Acid

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 4). Harmful if swallowed (H302). Do not eat, drink or smoke when using this product (P270).

Hazard class: Skin corrosion or irritation (Category 3). Causes mild skin irritation (H316).

Hazard class: Serious eye damage or irritation (Category 1). Causes serious eye damage (H318).

Hazard class: Specific target organ toxicity, single exposure; respiratory tract irritation (Category 3). May cause respiratory irritation (H335).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Salicylic acid	69-72-7	$2\text{-}HOC_6H_4COOH$	138.13	
Synonym: 2-Hydroxybenzoic acid				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). Immediately call a POISON CENTER or physician (P310).
If on skin: Wash with plenty of water. **If skin irritation occurs:** Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth (P330). Call a POISON CENTER or physician if you feel unwell (P301+P312).

SECTION 5 — FIRE FIGHTING MEASURES

Class IIIB combustible solid.
Flash point: 157 °C Flammable limits: Lower: 1.1% Autoignition Temperature: 540 °C
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
H-1
F-1
R-0

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Wipe up, place in sealed bag or container and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #1. Store with acids, anhydrides and peracids.
Moisture and light sensitive. Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White crystalline powder. Odorless.
Soluble: Many organic solvents. Slightly in water.

Boiling point: 211 ^{o}C
Melting point: 159 ^{o}C
Specific gravity: 1.443

SECTION 10 — STABILITY AND REACTIVITY

Avoid strong oxidizers and strong bases.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Toxic, irritant
Chronic effects: Possible mutagen
Target organs: Central nervous system

ORL-RAT LD_{50}: 891 mg/kg
IHL-RAT LC_{50}: > 900 mg/m^3/1H
SKN-RBT LD_{50}: > 10g/kg

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #24a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (200-712-3).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 678.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sand

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Specific target organ toxicity, repeated exposure (Category 2). May cause damage to organs through prolonged or repeated exposure through inhalation (H373). Do not breathe mist, vapors or spray (P260). Do not eat, drink or smoke when using this product (P270).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sand	14808-60-7	SiO_2	60.08	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic Miscellaneous.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless or tan-colored crystals. Odorless.
Usually the major constituent is SiO_2 (silicon dioxide).

Boiling point: 2950 ^{o}C
Melting point: 1470 ^{o}C
Specific gravity: 2.6

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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ROCHESTER MIDLAND CORPORATION -- SANEX CARPET EXTRACTION CONCENTRATE --
7930-01-436-8079

==========

MSDS Safety Information

==========

FSC: 7930
NIIN: 01-436-8079
MSDS Date: 01/29/1992
MSDS Num: CFDNP
Tech Review: 07/03/1997
Product ID: SANEX CARPET EXTRACTION CONCENTRATE
Responsible Party
Cage: 13091
Name: ROCHESTER MIDLAND CORPORATION
Address: 333 HOLLENBECK STREET
Box: 1515
City: ROCHESTER NY 14603-1515 US
Info Phone Number: 716-336-2200
Emergency Phone Number: 716-266-2283

==========

Contractor Summary

==========

Cage: 13091
Name: ROCHESTER MIDLAND CORPORATION
Address: 333 HOLLENBECK STREET
Box: 1515
City: ROCHESTER NY 14603-1515 US
Phone: 716-336-2200

==========

Item Description Information

==========

Item Manager: GSA
Item Name: CLEANING COMPOUND,RUG AND UPHOLSTERY SURFACE
Specification Number: NK
Type/Grade/Class: NK
Unit of Issue: BX
Quantitative Expression: 00000000004EA
UI Container Qty: 4
Type of Container: NK

==========

Ingredients

==========

Cas: 68424-85-1
Name: ALKYL DIMETHYL BENZYL AMMONIYUM CHLORIDE
% by Wt: 0.8
Other REC Limits: NONE RECOMMENDED
OSHA PEL: NOT ESTABLISHED
ACGIH TLV: NOT ESTABLISHED
Ozone Depleting Chemical: N

Cas: 68424-95-3
Name: DIALKYL DIMETHYL AMMONIUM CHLORIDE
% by Wt: 1.2
Other REC Limits: NONE RECOMMENDED
OSHA PEL: NOT ESTABLISHED
ACGIH TLV: NOT ESTABLISHED
Ozone Depleting Chemical: N

Cas: 6834-92-0
RTECS #: VV9275000
Name: SODIUM METASILICATE, ANHYDROUS
% by Wt: 1-5
Other REC Limits: 2 MG/M3 CEILING
OSHA PEL: NOT ESTABLISHED
ACGIH TLV: NOT ESTABLISHED
Ozone Depleting Chemical: N

Cas: 497-19-8
RTECS #: VZ4050000
Name: SODIUM CARBONATE
% by Wt: 1-5
Other REC Limits: 5 MG/M3 PER MFR
OSHA PEL: NOT ESTABLISHED
ACGIH TLV: NOT ESTABLISHED
Ozone Depleting Chemical: N
==========
Health Hazards Data
==========
LD50 LC50 Mixture: NK
Route Of Entry Inds - Inhalation: YES
Skin: YES
Ingestion: YES
Carcinogenicity Inds - NTP: NO
IARC: NO
OSHA: NO
Effects of Exposure: EYE: BURN, PERMANENT DAMAGE. SKIN: SEVERE IRRITATION,
BURN. INHAL: IRRITATION OF NOSE/THROAT. INGEST: NAUSEA, MUCOSAL DAMAGE,
& TOXIC EFFECTS.
Explanation Of Carcinogenicity: NK
Signs And Symptions Of Overexposure: NK
Medical Cond Aggravated By Exposure: RESPIRATORY.
First Aid: EYE: IMMED RINSE W/PLENTY WATER >15 MINUTES, LIFT LIDS.
REMOVE CONTACTS. SKIN: WASH W/SOAP & WATER, GET MED AID. INHAL: REMOVE
TO FRESH AIR. INGEST: GIVE SEVERAL GLASSES WATER/MILK TO DILUTE. AVOID
AL COHOL. CALL DR.
==========
Handling and Disposal
==========
Spill Release Procedures: SMALL SPILL: RINSE DOWN DRAIN OR WET MOP PICK
UP. LARGE SPILL: DIKE, TO PREVENT RUNOFF. RECLAIM IF POSSIBLE, ABSORB.
CONTAINERIZE. FLUSH RESIDUE AWAY W/WATER.
Neutralizing Agent: NK
Waste Disposal Methods: CONTACT STATE PESTICIDE OR ENVIRONMENTAL CONTROL
AGENCY OR HAZARDOUS WASTE REPRESENTATIVE AT NEAREST EPA REGIONAL OFFICE
FOR GUIDANCE.
Handling And Storage Precautions: DONT CONTAMINATE WATER, FOOD, OR FEED.

STORE IN COOL, DRY AREA. DONT REUSE EMPTY CONTAINER.
Other Precautions: READ/FOLLOW LABEL DIRECTIONS. KEEP OUT OF REACH OF CHILDREN.

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Fire and Explosion Hazard Information

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Flash Point Method: TOC
Flash Point Text: NONE
Autoignition Temp Text: NK
Lower Limits: NA
Upper Limits: NA
Extinguishing Media: SUITABLE FOR SURROUNDING FIRE.
Fire Fighting Procedures: NONE
Unusual Fire/Explosion Hazard: NONE

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Control Measures

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Respiratory Protection: NONE NORMALLY REQUIRED.
Ventilation: LOCAL EXHAUST.
Protective Gloves: RUBBER OR PLASTIC.
Eye Protection: CHEMICAL SPLASH GOGGLES/SAFETY GLASSES.
Other Protective Equipment: AS NEEDED.
Work Hygienic Practices: WASH SKIN THOROUGHLY AFTER HANDLING. REMOVE & WASH CONTAM CLOTHES BEFORE REUSE.
Supplemental Safety and Health: NK

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Physical/Chemical Properties

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NRC/State LIC No: NK
B.P. Text: 212F,100C
M.P/F.P Text: NK
Vapor Pres: AS WATER.
Vapor Density: AS WATER.
Spec Gravity: 1.08
PH: 13.0
Viscosity: NK
Evaporation Rate & Reference: AS WATER.
Solubility in Water: COMPLETE.
Appearance and Odor: WATER, WHITE LIQUID, MILD QUATERNARY ODOR.
Percent Volatiles by Volume: 86.0
Corrosion Rate: NK

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Reactivity Data

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Stability Indicator: YES
Stability Condition To Avoid: NONE
Materials To Avoid: NONE
Hazardous Decomposition Products: NONE
Hazardous Polymerization Indicator: NO
Conditions To Avoid Polymerization: NK

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Toxicological Information

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Ecological Information

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MSDS Transport Information
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Regulatory Information
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==========
Other Information
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Transportation Information
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Responsible Party Cage: 13091
Trans ID NO: 136719
Product ID: SANEX CARPET EXTRACTION CONCENTRATE
MSDS Prepared Date: 01/29/1992
Review Date: 07/03/1997
Article W/O MSDS: N
Tech Entry NOS Shipping Nm: NK
Coast Guard AMMO Code: NK
Net Unit Weight: NK
AF MMAC Code: NK
Multiple KIT Number: 0
Unit Of Issue: BX
Container QTY: 4
Type Of Container: NK
Additional Data: NK
==========
Detail DOT Information
==========
DOT Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION
==========
Detail IMO Information
==========
IMO Proper Shipping Name: NOT REGULATED FOR THIS MODE OF TRANSPORTATION
==========
Detail IATA Information
==========
IATA Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION
==========
Detail AFI Information
==========
AFI Proper Shipping Name: NOT REGULATED BY THIS MODE OF TRANSPORTATION
==========
HAZCOM Label
==========
Product ID: SANEX CARPET EXTRACTION CONCENTRATE
Cage: 13091
Company Name: ROCHESTER MIDLAND CORPORATION
Street: 333 HOLLENBECK STREET
PO Box: 1515
City: ROCHESTER NY
Zipcode: 14603-1515 US
Health Emergency Phone: 716-266-2283
Date Of Label Review: 10/12/1999
Hazard And Precautions: EYE: BURN, PERMANENT DAMAGE. SKIN: SEVERE IRRITATION, BURN. INHAL: IRRITATION OF NOSE/THROAT. INGEST: NAUSEA, MUCOSAL DAMAGE, & TOXIC EFFECTS.

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regardless of similarity to a corresponding Department of Defense or
other government situation.

SAFETY DATA SHEET

Betco Symplicity Sanibet Multi-Range

Section 1. Identification

GHS product identifier : Betco Symplicity Sanibet Multi-Range

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Supplier's details : Betco Corporation LTD
400 Van Camp Road
Bowling Green, OH 43402
www.betco.com
888-462-3826

Emergency telephone number (with hours of operation) : Chemtrec (800) 424-9300 24 hour

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of nonpesticide chemicals. Please read complete product label.

Classification of the substance or mixture : ACUTE TOXICITY (oral) - Category 4
SKIN CORROSION - Category 1
SERIOUS EYE DAMAGE - Category 1

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Harmful if swallowed.
Causes severe skin burns and eye damage.
(Previous statements per OSHA)
Causes irreversible eye damage and skin burns. Harmful if swallowed or absorbed through the skin.
(Previous statemens per EPA)

Precautionary statements

Prevention : Wear protective gloves: 1 - 4 hours (breakthrough time): disposable vinyl. Wear eye or face protection: Recommended: splash goggles. Wear protective clothing. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

Response : IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Section 2. Hazards identification

Storage : Store locked up.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

CAS number : Not applicable.

Product code : 237

Ingredient name	%	CAS number
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	≥3 - <5	68424-85-1
decyldimethyloctylammonium chloride	≥3 - <5	32426-11-2
didecyldimethylammonium chloride	≥1 - <3	7173-51-5
ethanol	≥1 - <3	64-17-5
dimethyldioctylammonium chloride	≥1 - <3	5538-94-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Inhalation : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

Section 4. First aid measures

Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage. (Previous statement per OSHA) Causes irreversible eye damage. (Previous statement per EPA)

Inhalation : No known significant effects or critical hazards.

Skin contact : Causes severe burns. (Previous statement per OSHA) Causes skin burns. Harmful if absorbed through the skin. (Previous statements per EPA)

Ingestion : Harmful if swallowed.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Section 5. Fire-fighting measures

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
ethanol	**ACGIH TLV (United States, 3/2016).** STEL: 1000 ppm 15 minutes. **OSHA PEL 1989 (United States, 3/1989).** TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 1000 ppm 10 hours. TWA: 1900 mg/m³ 10 hours. **OSHA PEL (United States, 6/2016).** TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours.

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead. Recommended: splash goggles

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. 1 - 4 hours (breakthrough time): disposable vinyl

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 8. Exposure controls/personal protection

Personal protective equipment (Pictograms) :

Section 9. Physical and chemical properties

Appearance

Physical state	:	Liquid.
Color	:	Clear. Red.-Pink
Odor	:	Mild. Sweetish.
Odor threshold	:	Not available.
pH	:	6 to 9
Melting point	:	Not available.
Boiling point	:	Not available.
Flash point	:	Closed cup: >65°C (>149°F) [Product does not sustain combustion.]
Evaporation rate	:	Not available.
Flammability (solid, gas)	:	Not available.
Lower and upper explosive (flammable) limits	:	Not available.
Vapor pressure	:	Not available.
Vapor density	:	Not available.
Relative density	:	0.98
Solubility	:	Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	:	Not available.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
Viscosity	:	Not available.

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	No specific data.
Incompatible materials	:	No specific data.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	LD50 Oral	Rat	426 mg/kg	-
didecyldimethylammonium chloride	LD50 Oral	Rat	84 mg/kg	-
ethanol	LC50 Inhalation Vapor LD50 Oral	Rat Rat	124700 mg/m³ 7 g/kg	4 hours -

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	Skin - Severe irritant	Rabbit	-	25 milligrams	-
didecyldimethylammonium chloride	Skin - Severe irritant	Rabbit	-	500 milligrams	-
ethanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	100 microliters	-
	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	400 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
ethanol	-	1	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Section 11. Toxicological information

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact : Causes serious eye damage. (Previous statement per OSHA) Causes irreversible eye damage. (Previous statement per EPA)

Inhalation : No known significant effects or critical hazards.

Skin contact : Causes severe burns. (Previous statement per OSHA) Causes skin burns. Harmful if absorbed through the skin. (Previous statements per EPA)

Ingestion : Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	Acute EC50 670 µg/l Fresh water	Algae - Chlorella pyrenoidosa - Exponential growth phase	96 hours
	Acute EC50 5.9 ppb Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 64 ppb Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 4.15 ppb Marine water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 32.2 ppb	Fish - Pimephales promelas	34 days
didecyldimethylammonium chloride	Acute EC50 110 µg/l Fresh water	Algae - Chlorella pyrenoidosa - Exponential growth phase	72 hours
	Acute EC50 14.22 ppb Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 18 ppb Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 39 µg/l Marine water	Crustaceans - Americamysis bahia - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 0.01 µg/l Fresh water	Fish - Acipenser transmontanus - Larvae	96 hours
	Chronic NOEC 25 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Chronic NOEC 125 µg/l Fresh water	Daphnia - Daphnia magna	21 days
ethanol	Acute EC50 17.921 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - Artemia franciscana - Larvae	48 hours
	Acute LC50 42000 µg/l Fresh water	Fish - Oncorhynchus mykiss	4 days
	Chronic NOEC 4.995 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 100 ul/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 0.375 ul/L Fresh water	Fish - Gambusia holbrooki - Larvae	12 weeks
dimethyldioctylammonium chloride	Acute EC50 0.1 ppm Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 0.7 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
ethanol	-0.35	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	1903	2920	1903	2920	2920	2920
UN proper shipping name	Disinfectant, Liquid, Corrosive N.O.S. (Dialkyldimethylammonium Chloride, Ethanol Solution)	Corrosive Liquid, Flammable, N.O.S. (Dialkyldimethylammonium chloride, Ethanol Solution) (ethanol)	Disinfectant, Liquid, Corrosive N.O.S. (Dialkyldimethylammonium Chloride, Ethanol Solution)	Corrosive Liquid, Flammable, N.O.S. (Dialkyldimethylammonium chloride, Ethanol Solution) (ethanol)	Corrosive Liquid, Flammable, N.O.S. (Dialkyldimethylammounium compounds, Ethanol Solution) (ethanol)	Corrosive Liquid, Flammable, N.O.S. (Dialkyldimethylammonium chloride, Ethanol Solution) (ethanol)
Transport hazard class(es)	8	8 (3)	8	8 (3)	8(3)	8(3)
Packing group	II	II	II	II	II	II
Environmental hazards	No.	No.	No.	Yes.	Yes.	No.
Additional information	**Limited quantity** Yes.	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3), 2.40-2.42 (Class 8), **Explosive Limit and Limited**	-	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. **Tunnel code** (D/E)	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.	The environmentally hazardous substance mark may appear if required by other transportation regulations.

Section 14. Transport information

		Quantity Index 5				

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 4(a) proposed test rules**: Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	≥3 - <5	No.	No.	No.	Yes.	No.
decyldimethyloctylammonium chloride	≥3 - <5	No.	No.	No.	Yes.	Yes.
didecyldimethylammonium chloride	≥1 - <3	No.	No.	No.	Yes.	No.
ethanol	≥1 - <3	Yes.	No.	No.	Yes.	No.
dimethyldioctylammonium chloride	≥1 - <3	No.	No.	No.	Yes.	Yes.

State regulations

Massachusetts : The following components are listed: ETHYL ALCOHOL; DENATURED ALCOHOL

New York : None of the components are listed.

Section 15. Regulatory information

New Jersey : The following components are listed: ETHYL ALCOHOL; ALCOHOL

Pennsylvania : The following components are listed: DENATURED ALCOHOL; ETHANOL

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

National inventory

Australia : Not determined.

Canada : All components are listed or exempted.

China : All components are listed or exempted.

Europe : All components are listed or exempted.

Japan : **Japan inventory (ENCS)**: Not determined.
Japan inventory (ISHL): Not determined.

Malaysia : Not determined.

New Zealand : All components are listed or exempted.

Philippines : All components are listed or exempted.

Republic of Korea : All components are listed or exempted.

Taiwan : All components are listed or exempted.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		2
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Section 16. Other information

Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Classification	Justification
Acute Tox. 4, H302 Skin Corr. 1, H314 Eye Dam. 1, H318	Expert judgment Expert judgment Expert judgment

History

Date of printing : 2/7/2017

Date of issue/Date of revision : 2/7/2017

Date of previous issue : 2/7/2017

Version : 2.03

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

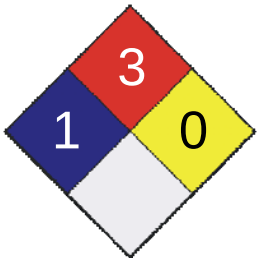
MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Name	**Sani-Hands ALC Antimicrobial Alcohol Gel Hand Wipes**	**MSDS0027**
CAS #	Mixture	
Product use	Antimicrobial	
Manufacturer	Professional Disposables International, Inc. Two Nice-Pak Park Orangeburg, NY 10962-1376 or Distributed by: Professional Disposables International Ltd. Ontario CA Phone (USA) 1-845-365-1700 (M-F 8am - 5pm) Phone (CANADA) 1-800-263-7067	

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Health	*	1
Flammability		3
Physical Hazard		0
Personal Protection		



2. Hazards Identification

Emergency overview

For external use only. Avoid contact with eyes.
WARNING
FLAMMABLE SOLID. Keep away from fire or flame.
Irritating to eyes.
Contains a potential mutagen.

Potential short term health effects

Routes of exposure	Eye, Skin contact, Inhalation, Ingestion.
Eyes	May cause irritation.
Skin	Non-irritating based on test data. Not a skin sensitizer based on test data.
Inhalation	Excessive intentional inhalation may cause respiratory tract irritation and central nervous system effects (headache, dizziness).
Ingestion	Not a normal route of exposure. May cause stomach distress, nausea or vomiting.
Target organs	Blood. Eyes. Liver. Respiratory system.
Chronic effects	Prolonged or repeated exposure can cause drying, defatting and dermatitis.
Signs and symptoms	Symptoms may include redness, edema, drying, defatting and cracking of the skin. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Alcohol	64-17-5	60 - 80

Composition comments Active ingredients are listed above.

4. First Aid Measures

First aid procedures

Eye contact	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
Skin contact	Discontinue use if irritation and redness develop. If condition persists for more than 72 hours, consult a physician.

Inhalation	If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.
Ingestion	If swallowed, get medical help or contact a Poison Control Center immediately.
Notes to physician	Symptoms may be delayed.
General advice	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Keep out of reach of children.

5. Fire Fighting Measures

Flammable properties	Flammable solid.
Extinguishing media	
Suitable extinguishing media	Dry chemical. Alcohol foam. Carbon dioxide.
Unsuitable extinguishing media	Not available
Protection of firefighters	
Specific hazards arising from the chemical	Not available
Protective equipment for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
Hazardous combustion products	May include and are not limited to: Oxides of carbon.
Explosion data	
Sensitivity to mechanical impact	Not available
Sensitivity to static discharge	Not available

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
Methods for containment	Prevent entry into waterways, sewers, basements or confined areas.
Methods for cleaning up	Remove sources of ignition. Pick up and discard towel.
Other information	Pick up and discard towel.

7. Handling and Storage

Handling	Use according to package label instructions. Use good industrial hygiene practices in handling this material.
Storage	Keep out of reach of children. Store at room temperature in the original container.

8. Exposure Controls / Personal Protection

Exposure limits

Ingredient(s)	Exposure Limits
Alcohol	**ACGIH-TLV** TWA: 1000 ppm **OSHA-PEL** TWA: 1000 ppm

Engineering controls	General ventilation normally adequate.
Personal protective equipment	
Eye / face protection	Not normally required. Avoid contact with eyes.
Hand protection	Not required.
Skin and body protection	As required by employer code.
Respiratory protection	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.
General hygiene considerations	Handle in accordance with good industrial hygiene and safety practice. When using do not eat or drink.

9. Physical & Chemical Properties

Appearance	Liquid saturated on wipe
Color	Clear, colorless on a wipe
Form	Pre-moistened towelette.
Odor	Alcohol
Odor threshold	Not available
Physical state	Pre-moistened towelette
pH	Not available
Freezing point	Not available
Boiling point	Not available
Flash point	23.33 °C (74 °F) (Liquid)
Evaporation rate	Not available
Flammability limits in air, lower, % by volume	Not available
Flammability limits in air, upper, % by volume	Not available
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	0.893 (Liquid)
Octanol/water coefficient	Not available
Solubility (H2O)	Pad is not soluble in water
Auto-ignition temperature	Not available
VOC (Weight %)	The liquid is a volatile.
Viscosity	Not available
Percent volatile	Not available

10. Chemical Stability & Reactivity Information

Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Avoid high temperatures. Do not mix with other chemicals.
Incompatible materials	Acids. Oxidizers. Caustics.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Component analysis - LC50

Ingredient(s)	**LC50**
Alcohol	31623 ppm rat

Component analysis - Oral LD50

Ingredient(s)	**LD50**
Alcohol	3450 mg/kg mouse; 1501 mg/kg rat

Effects of acute exposure

Eye	May cause irritation.
Skin	Non-irritating based on test data. Not a skin sensitizer based on test data.
Inhalation	Excessive intentional inhalation may cause respiratory tract irritation and central nervous system effects (headache, dizziness).
Ingestion	Not a normal route of exposure. May cause stomach distress, nausea or vomiting.
Sensitization	Non-hazardous by OSHA criteria.
Chronic effects	Non-hazardous by OSHA criteria.
Carcinogenicity	Non-hazardous by OSHA criteria.

ACGIH - Threshold Limits Values - Carcinogens

Alcohol	64-17-5	A4 - Not Classifiable as a Human Carcinogen

Mutagenicity	Mutagenic effects were observed in somatic and reproductive cells of live animals (rats and mice) exposed to high oral doses of ethanol.
Reproductive effects	Non-hazardous by OSHA criteria.
Teratogenicity	Non-hazardous by OSHA criteria.

12. Ecological Information

Ecotoxicity Components of this product have been identified as having potential environmental concerns.

Ecotoxicity - Freshwater Fish Species Data

Alcohol	64-17-5	96 Hr LC50 Oncorhynchus mykiss: 12900 mg/L [flow-through] (30 days old); 96 Hr LC50 Pimephales promelas: 14.2 mg/L

Ecotoxicity - Microtox Data

Alcohol	64-17-5	5 Min EC50 Photobacterium phosphoreum: 35470 mg/L; 30 min EC50 Photobacterium phosphoreum: 34634 mg/L

Ecotoxicity - Water Flea Data

Alcohol	64-17-5	48 Hr EC50 Daphnia magna: 9268 mg/L; 24 Hr EC50 Daphnia magna: 10800 mg/L

Environmental effects	Not available
Aquatic toxicity	Not available
Persistence / degradability	This product is not readily biodegradable.
Bioaccumulation / accumulation	Not available
Partition coefficient	Not available
Mobility in environmental media	Not available
Chemical fate information	Not available

13. Disposal Considerations

Waste codes	Not available
Disposal instructions	Dispose in accordance with all applicable regulations.
Waste from residues / unused products	Not available
Contaminated packaging	Not available

14. Transport Information

Department of Transportation (DOT)

Basic shipping requirements:

Proper shipping name	Solids containing flammable liquid, n.o.s. (ETHANOL)
Hazard class	4.1
UN number	UN3175
Packing group	II
Additional information:	
Special provisions	47, IB6, IP2, T3, TP33
Packaging exceptions	<1Kg-Consumer Commodity ORM-D
ERG number	133

15. Regulatory Information

US Federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
CERCLA/SARA Hazardous Substances - Not applicable.

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
Section 302 extremely hazardous substance	No
Section 311 hazardous chemical	Yes
Clean Air Act (CAA)	Not available
Clean Water Act (CWA)	Not available
Safe Drinking Water Act (SDWA)	Not available
Drug Enforcement Agency (DEA)	Not available
Food and Drug Administration (FDA)	Not available

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances

Alcohol	64-17-5	Present (refers to solutions greater than or equal to 25% which are not beverage alcohols)

U.S. - California - Proposition 65 - Developmental Toxicity

Alcohol	64-17-5	developmental toxicity, initial date 10/1/87 (when in alcoholic beverages)

U.S. - Massachusetts - Right To Know List

Alcohol	64-17-5	Teratogen

U.S. - Minnesota - Hazardous Substance List

Alcohol	64-17-5	Present

U.S. - New Jersey - Right to Know Hazardous Substance List

Alcohol	64-17-5	sn 0844

U.S. - Pennsylvania - RTK (Right to Know) List

Alcohol	64-17-5	Present

U.S. - Rhode Island - Hazardous Substance List

Alcohol	64-17-5	Toxic; Flammable

16. Other Information

Disclaimer	Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.
Recommended use	For external use only. Keep away from children, unless under adult supervision.
Issue date	29-Nov-2007
Effective date	30-Nov-2007
Prepared by	Dell Tech Laboratories Ltd. (519) 858-5021

Supercedes Date 08/28/2001 **Issuing Date** 02/10/2009

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name SANITRATE ADVANCED AERO
Product Code 5569

Recommended Use Disinfectants and general biocidal products
Chemical Nature Alcoholic solution (aerosol)

Information on Manufacturer

CERTIFIED LABS, DIV. OF NCH CORP.
BOX 152170
IRVING, TEXAS 75015

Emergency Telephone Number

CHEMTREC ® 800-424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview
Danger
Extremely flammable
Causes skin irritation
Causes eye irritation
May be harmful if absorbed through skin
Harmful if inhaled
May be harmful if swallowed

Color Light yellow **Physical State** Aerosol **Odor** Alcoholic

Potential Health Effects

Principle Route of Exposure	Skin contact, Eye contact, Inhalation.
Primary Routes of Entry	Inhalation, Ingestion, Skin Absorption.
Acute Effects	
Eyes	Causes eye irritation.
Skin	Causes skin irritation. The product may be absorbed through the skin.
Inhalation	May cause irritation of respiratory tract. Inhalation may cause central nervous system effects. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.
Ingestion	May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination.
Chronic Effects	Prolonged exposure may cause chronic effects. Liver injury may occur. Contains material that may adversely affect the developing fetus.
Target Organ Effects	Blood, Central nervous system, Liver, Reproductive System, Respiratory system, Heart, Skin, Eyes.
Aggravated Medical Conditions	Respiratory disorders. Skin disorders. Liver disorders. Neurological disorders.
Potential Environmental Effects	See Section 12 for additional Ecological information

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No
Butane	106-97-8
Ethyl alcohol	64-17-5
Propane	74-98-6
2-Phenylphenol	90-43-7

4. FIRST AID MEASURES

General Advice	Avoid contact with skin, eyes and clothing. Avoid breathing vapors, mist or gas.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes . Remove contact lenses. Call a physician or poison control center immediately.
Skin Contact	Take off all contaminated clothing immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician if symptoms occur.
Inhalation	Move to fresh air. In case of shortness of breath, give oxygen. If breathing has stopped, apply artificial respiration. Get medical attention immediately.
Ingestion	Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention if symptoms occur.
Notes to Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point 57°F / 14°C **Method** Seta closed cup
Autoignition Temperature No information available
Flammability Limits in Air % **Upper** 19.0 **Lower** 3.3
Suitable Extinguishing Media
Foam. Dry chemical. Water spray. Carbon dioxide (CO_2).
Specific Hazards Arising from the Chemical
Flame extension: >18 inches / >45 cm and Burnback: 6 inches / 15 cm . Solvent vapors are heavier than air and may spread along floors . Vapors may form explosive mixtures with air .
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Aerosol Level (NFPA 30B) - 2

NFPA	**Health**	2	**Flammability**	3	**Instability**	0
HMIS	**Health**	2	**Flammability**	3	**Instability**	0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Remove all sources of ignition. Ensure adequate ventilation. Use personal protective equipment. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
Environmental Precautions	Do not flush into surface water or sanitary sewer system.
Methods for Containment	Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a

container for disposal according to local / national regulations (see section 13)

Methods for Cleaning Up Pick up and transfer to properly labeled containers.

Neutralizing Agent Not applicable.

7. HANDLING AND STORAGE

Handling Avoid contact with skin, eyes and clothing. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Do not puncture.

Storage Keep away from open flames, hot surfaces and sources of ignition.

Storage Temperature **Minimum** 35°F / 2°C **Maximum** 120°F / 49°C

Storage Conditions **Indoor** X **Outdoor** **Heated** **Refrigerated**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Butane	TWA: 1000 ppm	no data available	TWA: 1900 mg/m^3 TWA: 800 ppm
Ethyl alcohol	TWA: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m^3	IDLH: 3300 ppm TWA: 1900 mg/m^3 TWA: 1000 ppm
Propane	TWA: 1000 ppm	TWA: 1000 ppm TWA: 1800 mg/m^3	IDLH: 2100 ppm TWA: 1000 ppm TWA: 1800 mg/m^3
2-Phenylphenol	No data available	no data available	no data available

Engineering Measures Use with local exhaust ventilation. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/Face Protection Safety glasses with side-shields.

Skin Protection Protective gloves.

Respiratory Protection Use NIOSH approved respiratory protection.

General Hygiene Considerations Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Aerosol	**Viscosity**	Non viscous
Color	Light yellow	**Odor**	Alcoholic
Appearance	Transparent	**pH**	Not applicable
Specific Gravity	0.82	**Bulk Density**	No information available
Evaporation Rate	30.55 (Butyl acetate=1)	**Percent Volatile (Volume)**	99.8
VOC Content (%)	91.1	**VOC Photoreactive (Y/N)**	Yes
VOC Content (g/l)	657	**Vapor Pressure**	497.4 mmHg @ 70 °F
Vapor Density	1.9	**Solubility**	Completely soluble
Boiling Point/Range	165°F / 74°C		

10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal conditions. Hazardous polymerization does not occur.

Conditions to Avoid Heat, flames, and sparks.

Incompatible Products Strong oxidizing agents.

Hazardous Decomposition Products Carbon oxides.

Possibility of Hazardous Reactions None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information No information available

Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Butane	no data available	no data available	658 mg/L (Rat) 4 h	no data available	no data available
Ethyl alcohol	7060 mg/kg (Rat)	no data available	no data available	no data available	no data available
Propane	no data available	no data available	658 mg/L (Rat) 4 h	no data available	no data available
2-Phenylphenol	1049 mg/kg (Rat)	2000 mg/kg (Rat)	0.949 mg/L (Rat) 1 h	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Butane	no data available	no data available	no data available	no data available	CNS, liver, heart
Ethyl alcohol	no data available	no data available	no data available	no data available	respiratory system, skin, eyes, CNS, liver, blood, reproductive system
Propane	no data available	no data available	no data available	no data available	CNS, liver, heart
2-Phenylphenol	no data available	no data available	no data available	no data available	no data available

Carcinogenicity .

Component	ACGIH	IARC	NTP	OSHA	Other
Butane	not applicable	not applicable	not applicable	not applicable	not applicable
Ethyl alcohol	not applicable	Group 1 in alcoholic beverages	Known	X	not applicable
Propane	not applicable	not applicable	not applicable	not applicable	not applicable
2-Phenylphenol	not applicable	not applicable	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information No information available

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Butane	no data available	no data available	no data available	no data available	2.89
Ethyl alcohol	no data available	LC50= 12900 mg/L Oncorhynchus mykiss 96 h LC50= 14.2 mg/L Pimephales promelas 96 h	EC50 = 34634 mg/L 30 min EC50 = 35470 mg/L 5 min	EC50 = 10800 mg/L 24 h EC50 = 9268 mg/L 48 h	-0.32
Propane	no data available	no data available	no data available	no data available	2.3
2-Phenylphenol	EC50= 0.85 mg/L Scenedesmus subspicatus 72 h	LC50= 5.99 mg/L Pimephales promelas 96 h LC50= 6 mg/L Lepomis macrochirus 96 h	EC50 = 2.05 mg/L 5 min	EC50 = 15 mg/L 48 h	3.18

Persistence and Degradability No information available
Bioaccumulation No information available
Mobility No information available

13. DISPOSAL CONSIDERATIONS

Product Disposal Dispose of in accordance with local regulations
Container Disposal Empty containers should be taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION

DOT DOT
Proper Shipping Name Consumer commodity
Hazard Class ORM-D
Description Consumer commodity ,ORM-D,

TDG
Proper shipping name Aerosols
Hazard Class 2.1
UN-No UN1950
Description AEROSOLS,2.1,UN1950 LTD QTY

ICAO
UN-No UN1950
Proper Shipping Name Aerosols
Hazard Class 2.1
Shipping Description Aerosols,UN1950 LTD QTY

IATA
UN-No UN1950
Proper Shipping Name Aerosols, flammable
Hazard Class 2.1
ERG Code 10L
Shipping Description UN1950,Aerosols, flammable,2.1 LTD QTY

IMDG/IMO
Proper Shipping Name Aerosols
Hazard Class 2.1
UN-No UN1950
EmS No. F-D, S-U
Shipping Description UN1950, Aerosols,2.1 LTD QTY

15. REGULATORY INFORMATION

Inventories
TSCA Complies
DSL Complies
U.S. Federal Regulations
SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372:

Component	CAS-No	Weight %	SARA 313 - Threshold Values
2-Phenylphenol	90-43-7	0.1-1	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	Yes	Yes	No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Butane	Not applicable	Not applicable
Ethyl alcohol	Not applicable	Not applicable
Propane	Not applicable	Not applicable
2-Phenylphenol	Not applicable	Not applicable

Canada

WHMIS Hazard Class
Not applicable.

16. OTHER INFORMATION

Prepared By	Dan Hollas
Supercedes Date	08/28/2001
Issuing Date	02/10/2009
Reason for Revision	No information available
Glossary	No information available
List of References	No information available

CERTIFIED LABS, DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage or disposal of the product. The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

SEALING COMPOUND
KILLARK CATALOG NUMBERS: SC-4 OZ, SC-8 OZ, SC-1 LB, SC-5 LB

Metalcrete Industries
4133 Payne Avenue
Cleveland, Ohio 44103
Prepared: 01/21/2015

Safety Data Sheet

SECTION I - PRODUCT IDENTIFICATION

TRADE NAME:	**Instarok Cable Sealing Cement**
PRODUCT CODE:	2010430
MANUFACTURER:	Metalcrete Industries 4133 Payne Avenue Cleveland, Ohio 44103
RECOMMENDED USE:	All Purpose Anchoring Compound
TELEPHONE:	1-440-526-5600
EMERGENCY PHONE:	1-800-728-248

SECTION 2 – HAZARDS IDENTIFICATION

Instarok Cable Sealing Cement is a gray powder material. Dust in air may irritate respiratory tract and eyes. Do not breathe in dust. Use a respirator while using this product. If overexposed to dust, leave the area immediately to breathe fresh air. In case of eye contact, flush with water and consult a physician. Breathing in dust may result in a delayed lung injury. Alkaline contents may cause skin irritation. Wear impervious gloves and wash skin thoroughly after handling.

SECTION 3 – PRODUCT COMPOSITION

Chemical Name	CAS Number	Percentage
Portland Cement	65997-15-1	35.0 – 65.0
Calcium Sulfate	7778-18-9	35.0 – 65.0
Melamine Sulfonate	64787-97-9	< 1.0

SECTION 4 – FIRST AID MEASURES

Eyes:	Flush eyes with water for at 15 minutes immediately after exposure. Contact a medical professional.
Ingestion:	Do not induce vomiting. If ingested, contact a physician or poison control center immediately.
Inhalation:	Leave area to avoid dust and breathe fresh air. Seek medical attention is respiratory irritation persists.
Skin:	Wash skin with soap and water. If skin irritation or rash develops, seek medical attention.

SECTION 5 – FIRE-FIGHTING MEASURES

Flash point:	No information available.
Autoignition temperature:	No information available.
Flammable limits in air - Lower (%):	No information available.
Flammable limits in air - Upper (%):	No information available.
Suitable extinguishing media:	This material is non-combustible. Use extinguishing media appropriate to the surrounding area.
Protective equipment for firefighters:	Protective clothing and approved breathing apparatus consistent with normal firefighting professionals and procedures.
Firefighting measures:	This material is not expected to burn.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Avoid creating excessive dust. Dampen material with water to control dusting. Sweep up and transfer into an appropriate container for disposal. Dispose of this material in accordance with federal, state and local regulations. Do not put down sink as slurry material may plug drains.

SECTION 7 – HANDLING AND STORAGE

Material should be stored in a cool, dry location in a sealed container. When handling this material, avoid inhaling dust and avoid contact with eyes and skin. The use of respirators, goggles, and gloves are recommended protective handling equipment.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

PERSONAL PROTECTION EQUIPMENT

Eye protection:	Wear appropriate eye protection such as safety goggles or face shields. Avoid contact eyes and face while handling this material. If eyes become contaminated, use eye wash station.
Respiratory protection:	Wear appropriate NIOSH approved dust respirator when airborne dust levels exceed threshold limit value as indicated on manufacturer's SDS.
Skin protection:	Wear impervious protective gloves. In addition to protecting hands, make sure suitable protective clothing is worn by material handlers to prevent skin irritation elsewhere on body.
Engineering Controls:	This material should be used in well ventilated areas. Mechanical and local exhausts should be used in poorly ventilated areas.

EXPOSURE LIMITS

Chemical Name	CAS Number	Regulation	Limit	
Portland Cement	65997-15-1	OSHA PEL	5.0 mg/m^3	Respirable Fraction
		OSHA PEL	15 mg/m^3	Total Dust
		ACGIH TWA	10 mg/m^3	
Calcium Sulfate	7778-18-9	OSHA PEL	5.0 mg/m^3	Respirable Fraction
		OSHA PEL	15 mg/m^3	Total Dust
		OSHA TWA	5.0 mg/m^3	Respirable Fraction
		OSHA TWA	15 mg/m^3	Total Dust
		ACGIH TWA	10 mg/m^3	

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Form:	Powder
Color:	Gray
Odor:	Odorless
pH:	Approximately 9
Specific gravity:	2.7
Solubility in water:	Slightly soluble

SECTION 10 – STABILITY AND REACTIVITY

Stability:	This material is stable under recommended storage, usage, and handling procedures.
Hazardous Reactions:	Will not occur under normal conditions.
Non-Hazardous Reactions:	This material becomes hard when exposed to water.

SECTION 11 – TOXICOLOGICAL INFORMATION

TOXICOLOGICAL OVERVIEW

Instarok Cable Sealing Cement is a gray powder material. Dust in air may irritate respiratory tract and eyes. Do not breathe in dust. Use a respirator while using this product. If overexposed to dust, leave the area immediately to breathe fresh air.

ACUTE HEALTH EFFECTS OF EXPOSURE & ROUTES OF EXPOSURE

Eyes:	Dust may cause eye irritation and abrasion. Flush eyes with water immediately after. Exposure to avoid irritation and possible chemical burns.
Ingestion:	Digesting this material may cause irritation to the mouth, throat, and digestive tract. If ingested, contact your primary care physician immediately.
Inhalation:	Do not breathe in dust. Dust may irritate nose, mouth, and respiratory tract.
Skin:	This material may cause skin irritation. Exposure to the skin may cause cracking, dryness, irritation, or possible chemical burns. Wet portland cement and alkaline contents can cause inflammation of skin.

SECTION 12 – ECOLOGICAL INFORMATION

No Data Available.

SECTION 13 – DISPOSAL CONSIDERATION

Material disposal method:	Disposal of this material should comply with federal, state, and local regulations. Do not discharge into drains or groundwater runoff.
Container disposal method:	Disposal of this material's packaging should comply with federal, state, and local regulations.

SECTION 14 – TRANSPORT INFORMATION

USDOT:	NOT REGULATED, NON-HAZARDOUS
NMFC:	Class 50
Commodity:	Hydraulic Cement

SECTION 15 – REGULATORY INFORMATION

FEDERAL REGULATIONS

Registration:	All components are either listed or exempt from the Toxic Substance Control Act inventory.
OSHA Hazards:	Irritant; Acute effects reported; No chronic effects reported; No reports of carcinogenicity
Hazard Categories:	EPCRA 311/312 – Acute Health Hazard

STATE REGULATIONS

State RTK	Chemical Name	CAS Number
MA, NJ, PA	Portland Cement	65997-15-1
MA, NJ, PA	Calcium Sulfate	7778-18-9
MA, NJ, PA	Melamine Sulfonate	64787-97-9

SECTION 16 – OTHER INFORMATION

HMIS Rating	
Health	1
Flammability	0
Physical Hazard	0

0 = Essentially no danger
1 = Slight danger
2 = Moderate danger
3 = Serious danger
4 = Extreme danger

Metalcrete Industries believes the information contained within this Safety Data Sheet to be accurate and reliable as of the date of preparation, or is obtained from sources believed to be accurate. Metalcrete Industries gives no warranty expressed or implied as to the accuracy of the information contained herein and assume no responsibility for damage to any person, property, or business arising from use of this material. Hazard information stated within this document is provided in good faith, is for the consideration of the user, and is subject to the user's own investigation of compliance with acceptable regulations. It is the sole responsibility of the purchaser or user of this product to ensure that it is properly and safely used.

30068939
30248445
30068940
30248446
30068941
30075879

MATERIAL SAFETY DATA SHEET

1. **Chemical Product and Company Identification**
   Description: School Smart White Glue
   Product Type: Liquid Glue

2. **Manufacturer/Supplier Information**
   School Specialty, Inc.
   W6316 Design Drive
   Greenville, WI 54924 School Specialty Phone: 888-388-3224
   Contact your local poison control center

3. **Composition, Information On Ingredients:**
   The product conforms to ASTM D-4236 standards (the standard practice for labeling art materials for acute and chronic adverse health hazards)
   CAS Number: Not Available
   EC Number: Not Available
   Percentage: 100%

4. **Emergency Overview:**
   Appearance: White Liquid – medium viscosity
   Odor: None
   Not a fire hazard

5. **Hazards**
   Ingestion: Not harmful under normal conditions of use
   Inhalation: Not harmful under normal conditions of use.
   Skin: Not harmful under normal conditions of use.
   Eyes: Not harmful under normal conditions of use.

   First aid measures
   Ingestion: If accidentally swallowed, drink large amounts of water. Contact poison control center or hospital emergency room for any other treatment procedures.
   INHALATION: N/A
   SKIN: Rinse with water.
   EYES: Flush with large amounts of water

6. **Fire Fighting Measures**
   Product is non-flammable

   Accidental Release Measures:
   Dispose according to Federal, State and Local regulations.

7. Handling and Storage

Handling
Handle in accordance with good industrial hygiene and safety practices.
INHALATION: N/A
SKIN: Not harmful under normal conditions of use.
EYES: Not harmful under normal conditions of use.

Storage:
Store in a cool, dry place.
Keep container tightly closed.

8. Exposure Controls/Personal Protection

Exposure Controls
Not harmful under normal conditions of use.

Personal Protection
None Required. No acute health effects expected

9. Physical and Chemical Properties

Percent volatiles	Not applicable
PH	Not applicable
Specific Gravity	Not applicable
Appearance	White Liquid
Auto-ignition temperature	Not applicable
Boiling Point	Not applicable
Vapor Density	Not applicable
Vapor Pressure	Not applicable
Flammable Limits	Not applicable
Flash Point	Not applicable
Freezing Point	Not applicable
Odor	None
Solubility in Water	Not applicable

10. Stability and Reactivity
Stable

Toxicological Information
Product is non-toxic under normal conditions of use

Ecological Information
Not available

Incompatibilities
None

Decomposition Products
None

Hazardous Polymerization
Will not occur

Other Hazards:
None known

Disposals
Dispose in accordance with all applicable federal and local regulations.

11. Other Information
Product conforms to Non-Toxic ASTM D-4236.

083025 → 060

MATERIAL SAFETY DATA SHEET RCVD MAY 2006

M.S.D.S. File Number: _____

SECTION I - MATERIAL IDENTIFICATION AND USE

Controlled Product Yes ☐ No ☒

Material Name: LIQUID TEMPERA SCHOOL SMART ALL COLORS		Product Identification Number	
Manufacturer's Name: KINGDER Colours of Cda. Inc.		Supplier's Name	
Street Address: 763 Warden Ave., Unit #5		Street Address	
City: Scarborough	Province: Ontario	City	Province
Postal Code: M1L 4B7	Emergency Telephone No.: 416-285-5778	Postal Code	Emergency Telephone No.
Chemical Name: non toxic water base	Chemical Family: water colour	Chemical Formula: n.a.	
Molecular Weight	Trade Name and Synonyms: LIQUID TEMPERA SCHOOL SMART	Material Use: Educational	

Flammability	Reactivity
n.a.	n.a.
Health	**Personal Protection**
n.a.	n.a.

SECTION II - HAZARDOUS INGREDIENTS OF MATERIAL

Hazardous Ingredients	Approximate Concentration %	C.A.S. N.A. or U.N. Numbers	"Exposure limits"	LD_{50}/LC_{50} Specify Species and Route
NON TOXIC NON HAZARDOUS WATER BASED PRODUCTS LEAD FREE DEVOID OF METAL CONTENT	n.a.	n.a.	n.a.	n.a.

SECTION III - PHYSICAL DATA FOR MATERIAL

Physical State: Gas ☐ Liquid ☒ Solid ☐	Odour and Appearance: colourant/perfume odour		Odour Threshold (p.p.m.): n.a.	Specific Gravity: 1.1
Vapour Pressure (mm): as water	Vapour Density (Air = 1): as water	Evaporation Rate: n.a.	Boiling Point (°C): 212°F	Freezing Point (°C): 0°F
Solubility in Water (20°C): appreciable	% Volatile (by volume): n.a.	pH		Coefficient of water/oil distribution

SECTION IV - FIRE AND EXPLOSION HAZARD OF MATERIAL

Flammability Yes ☐ No ☒ — If yes, under which conditions:

Means of Extinction: water

Special Procedures: none required

Flashpoint (°C) and Method	Upper explosion limit (% by volume): all are n.a.	Lower explosion limit (% by volume)	
Auto Ignition Temperature (°C)		Hazardous Combustion Products	
Explosion Data Sensitivity to Mechanical Impact	Rate of Burning	Explosive Power	Sensitivity to Static Discharge

SECTION V - REACTIVITY DATA

Chemical Stability Yes ☐ No ☒ — If no, under which conditions?

Incompatibility to other substances Yes ☐ No ☐ — If no, which ones?

Reactivity and under what conditions: all are n.a.

Hazardous Decomposition Products

Stock No. M.S.D.S.-8747

TTSI

Material Name/Identifier

LIQUID TEMPERA SCHOOL SMART ALL COLOURS

SECTION VI - TOXICOLOGICAL PROPERTIES OF PRODUCT

Route of Entry ☐ Skin Contact ☐ Skin Absorption ☐ Eye Contact ☐ Inhalation Acute ☐ Inhalation Chronic ☐ Ingestion

all are n.a.

Effects of Acute Exposure to Product

None

Effects of Chronic Exposure to Product

None

LD_{50} of Product (Specify Species and Route)	Irritancy of Product	Exposure limits of Product
LC_{50} of Product (Specify Species)	Sensitization to Product	Synergistic materials

☐ Carcinogenicity ☐ Reproductive effects ☐ Teratogenicity ☐ Mutagenicity

SECTION VII - PREVENTIVE MEASURES

Personal Protective Equipment

all are n.a.

Gloves (Specify)	Respiratory (Specify)	Eye (Specify)	Footwear (Specify)
Clothing (Specify)	Other (Specify)		

Engineering Controls (e.g. ventilation, enclosed process, specify)

Leak and Spill Procedure

Flush with water

Waste Disposal

Dispose or incinerate

Handling Procedures and Equipment

Storage Requirements

None

Special Shipping Information

SECTION VIII - FIRST AID MEASURES

Skin

Eye

Flush with water - eyedrops are helpful

Inhalation

Ingestion

Drink 2 glasses of water

General advice

None required

SECTION IX - PREPARATION DATE OF M.S.D.S.

Additional Information

None required

Sources Used

Prepared by:

Wm.L.M. King

416-285-5923

JANUARY 2005

WLM King

TTSI 416 335 6423

PRINTED IN CANADA

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 182.00

Revision Date: June 25, 2015

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

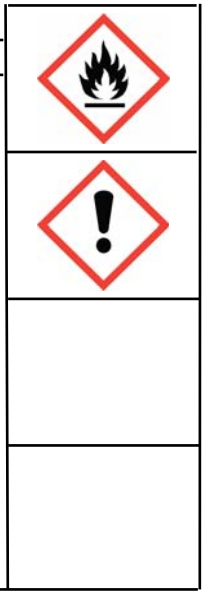
sec-Butyl Alcohol

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Flammable liquids (Category 3). Flammable liquid and vapor (H226). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Serious eye damage or irritation (Category 2A). Causes serious eye irritation (H319).

Hazard class: Specific target organ toxicity, single exposure; respiratory tract irritation (Category 3). May cause respiratory irritation (H335). Avoid breathing mist, vapors or spray (P261).

Hazard class: Specific target organ toxicity, single exposure; Narcotic effects (Category 3). May cause drowsiness or dizziness (H336). Avoid breathing mist, vapors or spray (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
sec-Butyl alcohol	78-92-2	$CH_3CHOHCH_2CH_3$	74.12	
Synonyms: 2-Butanol; sec-Butanol				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin (or hair): Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Class 1C flammable liquid; dangerous fire risk.
This material may develop explosive peroxides. Use only fresh material.
Flash point: 24 °C Flammable limits: Lower: 1.7% Upper: 9.8% Autoignition Temperature: 405 °C
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher (P370+P378).

NFPA CODE
H-2
F-3
R-0

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all ignition sources and ventilate area. Contain the spill with sand or other inert absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, amines and amides. Use only fresh material. Known to develop explosive peroxides.
Store in a dedicated flammables cabinet. If a flammables cabinet is not available, store in Flinn Saf-Stor™ can.
Keep container tightly closed (P233). Keep cool (P235). Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).
Exposure guidelines: PEL 150 ppm (OSHA) TLV 100 ppm (ACGIH) IDLH 2000 ppm

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless liquid. Strong rubbing alcohol-like odor.
Soluble: Slightly in water. Miscible with alcohol and ether.

Boiling point: 99.5 ^{o}C
Melting point: -114 ^{o}C
Refractive index: 1.3978
Specific gravity: 0.81

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with acids, acid chlorides, acid anhydrides, oxidizing materials, and halogens. Explosive peroxides have been known to develop in storage.
Shelf life: Poor. Use only fresh material. Known to develop explosive peroxides. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Eye, skin, and respiratory tract irritation. Nausea, dizziness, and headache.
Chronic effects: N.A.
Target organs: Eyes, skin, respiratory system, and central nervous system.

ORL-RAT LD_{50}: 6480 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RAT LD_{50}: >2 g/kg

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #18b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Butanols. Hazard class: 3, Flammable liquid. UN number: UN1120.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

EINECS-listed (240-029-8), RCRA D001.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: June 25, 2015

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MATERIAL SAFETY DATA SHEET
(ESSENTIALLY SIMILAR TO OSHA FORM 20, COMPLIES WITH 29CFR 1910:1200)

HAZARD RATING: HEALTH - 1, FIRE - 0, REACTIVITY - 0
MINIMAL - 0 SLIGHT - 1 MODERATE - 2 SERIOUS - 3 SEVERE - 4

*****SECTION I: GENERAL INFORMATION*****

MANUFACTURED BY: CREATIVE CHEMICALS, INC.
ADDRESS: 88 WINTER STREET
HOLYOKE, MA 01040
TELEPHONE NUMBER: 413-533-8050
DATE ISSUED/REVISED: MAY 19, 2013
EMERGENCY RESPONSE NUMBER: 800-255-3924
FORMULA NO.: C-275
PRODUCT NAME: SECURE DETERGENT/DISINFECTANT
CHEMICAL FAMILY: NONIONIC/QUATERNARY BLEND

HAZARDOUS MATERIAL DESCRIPTION
(PROPER SHIPPING NAME, HAZARD CLASS, HAZARD ID NO. (49 CFR 172.101)
NONE

*****SECTION II: HAZARDOUS INGREDIENTS*****
AS LISTED IN EPA 40CFR PARTS 261 & 116 AND/OR MASS. DEQE CMR 670.00

CHEMICAL NAME CAS NO. % BY WEIGHT HAZARD DATA

CONTAINS NO HAZARDOUS INGREDIENTS LISTED IN EPA 40CFR PART 261 OR MASSACHUSETTS DEQE CMR 670.00
CONTAINS NO INGREDIENT LISTED AS A CARCINOGEN OR POTENTIAL CARCINOGEN BY IARC, NTP, OR OSHA.

*****SECTION III: PHYSICAL DATA*****

BOILING POINT/RANGE (F): 200 F
SPECIFIC GRAVITY (WATER=1): 1.02
% VOLATILE BY VOLUME: N/A
EVAP. RATE (BUAC=1): COMPARABLE TO WATER (SLOWER)
WEIGHT/GALLON (WATER=8.33#): 8.40 #
SOLUBILITY IN WATER: COMPLETE
VAPOR PRESSURE (MM/HG): COMPARABLE TO WATER
PHYSICAL STATE: CLEAR, THIN LIQUID
VAPOR DENSITY (AIR=1): (HEAVIER)
ODOR: FLORAL OR LEMON

*****SECTION IV: FIRE AND EXPLOSION HAZARD DATA*****

FLASH POINT (METHOD USED): 200 F
FLAMMABLE LIMITS: LEL: NA UEL: NA
FIRE EXTINGUISHING MEDIA: WATER FOG, FOAM, GAS (CO2/HALON), DRY CHEMICAL
SPECIAL FIRE FIGHTING PROCEDURES: SELF-CONTAINED BREATHING APPARATUS
UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE

*****SECTION V: HEALTH HAZARD DATA*****

THRESHOLD LIMIT VALUE: NOT ESTABLISHED
PRIMARY ROUTES OF ENTRY: SKIN ABSORPTION
EFFECTS OF OVEREXPOSURE:
...ACUTE - MAY CAUSE SKIN AND EYE IRRITATION. HARMFUL IF SWALLOWED.
...CHRONIC - PROLONGED SKIN AND EYE CONTACT MAY CAUSE DERMATITIS AND CONJUNCTIVITIS.
EMERGENCY AND FIRST AID PROCEDURES:
...INHALATION - NO HAZARD.
...EYES - FLUSH THOROUGHLY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES, KEEPING EYELIDS APART. IF IRRITATION PERSISTS, GET MEDICAL HELP.
...SKIN - SEE "EYES." REMOVE CLOTHING IF CONTAMINATED.
...INGESTION - DRINK LARGE QUANTITIES OF WATER AND INDUCE VOMITING IF PERSON IS CONSCIOUS. GET IMMEDIATE MEDICAL ATTENTION.

*****SECTION VI: REACTIVITY DATA*****

STABILITY: STABLE
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR
CONDITIONS TO AVOID: TEMPERATURE EXTREMES.
MATERIALS TO AVOID: DO NOT MIX WITH OTHER CHEMICALS.
HAZARDOUS DECOMPOSITION PRODUCTS: NITROUS OXIDES, AMMONIACAL VAPORS

*****SECTION VII: SPILL OR LEAK PROCEDURES*****

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
CONTAIN ALL SPILLS AND LEAKS. VENTILATE AREA.
...RINSE AREA WITH WATER OR ABSORB WITH FLOOR ABSORBENT, SAWDUST OR RAGS.
WASTE DISPOSAL:
...FLUSH DOWN SANITARY SEWER SYSTEM OR PLACE IN SEALED CONTAINER & DISPOSE OF ACCORDING TO LOCAL REGULATIONS.

*****SECTION VIII: SPECIAL PROTECTION INFORMATION*****
RESPIRATORY PROTECTION: NONE REQUIRED.
VENTILATION TYPE: LOCAL EXHAUST ADEQUATE.
PROTECTIVE GLOVES: RECOMMENDED.
EYE PROTECTION: RECOMMENDED.
OTHER PROTECTIVE EQUIPMENT: NONE.

*****SECTION IX: SPECIAL PRECAUTIONS*****
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:
...DO NOT STORE AT TEMPERATURE EXTREMES. KEEP FROM FREEZING. AVOID CONTACT WITH SKIN AND EYES. WASH HANDS THOROUGHLY AFTER USE. DO NOT TAKE INTERNALLY.
OTHER PRECAUTIONS: KEEP OUT OF THE REACH OF CHILDREN. SPILLED MATERIAL IS SLIPPERY.

MATERIAL SAFETY DATA SHEET

SECTION I: PRODUCT IDENTIFICATION AND USE

Product Name: Natural Dish Liquid

Manufacturer's Name: Seventh Generation, Inc.

Address: 60 Lake Street, Burlington, VT 05401, USA

Emergency Telephone Number (U.S., Canada):
M-F 9 am - 4 pm ET (except holidays): 1-800-456-1191
Outside these hours: 1-800-255-3924 (ChemTel)

Product Use:
Hand Dishwashing

SECTION II: HEALTH HAZARD DATA

Emergency Overview: No known health hazards.

Potential Health Effects:

Eyes: Minimal Irritant
Skin: Non-Irritant
Inhalation: Unknown
Ingestion: Non-Toxic

SECTION III: PRODUCT INGREDIENTS

Ingredient Name	Concentration %	CAS Number	Exposure Limits	Toxicity Data LD_{50} (oral, rat)
aqua (water)	30-100	7732-18-5	NAV	NAV
sodium lauryl sulfate	10-30	151-21-3	NAV	>500-5000 mg/kg
lauramine oxide	1-5	1643-20-5	NAV	2700 mg/kg (mouse)
glycerin	1-3	56-81-5	NAV	>12000 mg/kg
caprylyl/myristyl glucoside	≤1	68515-73-1 &	NAV	>2000 mg/kg
magnesium chloride	≤1	7791-18-6	NAV	8100 mg/kg
citric acid	≤1	77-92-9	NAV	3000 mg/kg
methylisothiazolinone (and) benzisothiazolinone	≤1	2682-20-4 &	NAV	>2500 mg/kg
essential oils & botanical extracts*	≤1	NAV	NAV	NAV

*Free & Clear: not applicable.

*Lavender Floral & Mint: citrus aurantifolia (lime), cananga odorata (ylang ylang), lavandula angustifolia (lavender), mentha spicata (spearmint), mentha piperita (peppermint). d-Limonene is a component of these essential oils.

*Lemongrass & Clementine Zest: citrus nobilis (clementine), citrus aurantium bergamia (bergamot), cymbopogon citratus (lemongrass), canarium luzonicum nonvolatiles (elemi), citrus aurantium dulcis (orange). d-Limonene is a component of these essential oils.

*Fresh Citrus & Ginger: cedrol, canarium luzonicum gum nonvolatiles (elemi) oil, cinnamomum zeylanicum (cinnamon) bark extract and leaf oil, citrus aurantifolia (lime) oil, citrus aurantium amara (bitter orange) oil, citrus aurantium bergamia (bergamot) fruit oil, citrus aurantium dulcis (orange) oil, citrus limon (lemon) peel oil, coriandrum sativum (coriander) fruit oil, elettaria cardamomum (cardamon) seed oil, eugenia caryophyllus (clove) leaf oil, myristica fragrans (nutmeg) kernel oil, pelargonium graveolens (geranium) flower oil, zingiber officinale (ginger) root oil. d-Limonene is a component of these essential oils.

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SECTION IV: FIRST AID MEASURES

First Aid Procedures:

Eyes: Flush eyes with water immediately after contact. Call a physician if irritation persists.
Skin: Not Applicable.
Inhalation: Not Applicable.
Ingestion: Drink 4-8 ounces of water or milk immediately. If prolonged nausea or pain occurs call a doctor.

SECTION V: FIRE FIGHTING MEASURES

Flash Point (°C) and Method: Non flammable.

Extinguishing Media: As appropriate for surrounding fire. Use water, dry chemical, carbon dioxide or foam.

MATERIAL SAFETY DATA SHEET

Special Procedures:	Fire fighters should wear self contained breathing apparatus as for surrounding fire.
SECTION VI: ACCIDENTIAL RELEASE MEASURES	
Spill and Leak Precautions:	Absorb the spill with a paper towel.
SECTION VII: HANDLING, DISPOSAL & STORAGE	
Handling Procedures and Equipment:	No unusual precautions necessary.
Waste Disposal:	Any disposal practice must be in compliance with local, state, and federal laws and regulations. Recycle empty container.
Storage Procedures:	. KEEP OUT OF REACH OF CHILDREN & PETS.
Personal Protective Equipment:	Not Applicable.
Engineering Controls:	Not Applicable.
SECTION VIII: PHYSICAL & CHEMICAL PROPERTIES	
Physical State:	Liquid.
Appearance & Color:	Clear Light amber
pH: (100%)	7.9 - 8.1
Specific Gravity:	1.01 - 1.04
Solubility in Water:	Miscible.
Odor Threshold Limit:	Not Applicable.
SECTION IX: STABILITY & REACTIVITY	
Chemical Stability:	X Stable; Unstable under the following conditions:
Incompatible Materials:	None known.
Hazardous Decomposition Products:	None known.
Possibility of Hazardous Reactions:	None known.
SECTION X: TOXICOLOGICAL INFORMATION	
Route(s) of Entry:	X Skin Contact; Skin Absorption; X Eye Contact; Inhalation, Acute; Inhalation, Chronic; X Ingestion
Effects of Acute Exposure to Product:	Acute exposure may result in eye irritation, however no permanent damage is expected.
Effects of Chronic Exposure to Product:	NAP
LD_{50} (oral) of Product (mg/kg) (based on ingredients):	>5000
Chronic Toxicities:	Carcinogenic; Reproductive Toxin; Teratogenic; Mutagenic; X None
SECTION XI: ECOLOGICAL INFORMATION	
Ecotoxicity: LC_{50} of Product:	<100 mg/L
Environmental Fate:	This product is biodegradable.
SECTION XII: TRANSPORTATION INFORMATION	
DOT: Not regulated.	
TDG: Not regulated.	
SECTION XIII: REGULATORY INFORMATION	
Toxic Substances Control Act (TSCA)	All ingredients are listed or exempt from listing on the Chemical Substance Inventory.
California Proposition 65	No ingredients listed.
SECTION XIV: OTHER INFORMATION	
HMIS Classification	0 Health; 0 Flammability; 0 Physical Hazards; A PPE
SECTION XV: PREPARATION INFORMATION	
Additional Information: The information in this MSDS relates only to the specific material designated herein and does not relate to use in combination with any other material or any process.	
Sources Used: General MSDS chemical references.	

Prepared by	**Telephone Number**	**Issue Date**
Seventh Generation, Inc.	800-456-1191	26-Jun-2013

The information contained in this Material Safety Data Sheet is provided by Seventh Generation, Inc. free of charge. While believed to be reliable, it is intended for use by skilled persons at their own risk. Seventh Generation, Inc. assumes no responsibility for events resulting from, or damages incurred from, its use.

000001-1/2

Material Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 06/22/2010 Reviewed on 06/22/2010

1 Identification of substance

Trade name: **STRIPE YELLOW TRAFFIC MARKER**

Product codes: 0000200646

Manufacturer: SEYMOUR OF SYCAMORE
917 Crosby Avenue
Sycamore, IL 60178
(815)-895-9101, www.seymourpaint.com

Emergency information: CHEMTEL 1-800-255-3924, 813-248-0585 *if located outside the U.S.*

2 Composition/Data on components

Chemical Description: This product is a mixture of the substances listed below with nonhazardous additions.

Dangerous components:		
64742-89-8	VM&P Naphtha	23.47%
74-98-6	propane	12.6%
106-97-8	n-butane	7.4%
64742-47-8	Mineral Spirits	4.45%
7727-43-7	barium sulphate, natural	2.17%

3 Hazards identification

Hazard description: Extremely flammable

Physical dangers: Extremely flammable liquid and vapor in a pressurized container. Keep away from heat, sparks, and flame.
Has narcotizing effect.
Extremely flammable.

Effects of chronic overexposure: May cause permanent brain and nervous system damage. Repeated overexposure can also damage kidneys, lungs, liver, heart, and blood. Intentional misuse by deliberately inhaling the contents may be harmful or fatal.

NFPA ratings (0 - 4):
Health- 1
Flammability- 3
Reactivity- 3

HMIS-ratings (0 - 4):
Health- 1
Flammability- 3
Physical Hazard- 3

4 First aid measures

After inhalation: Supply fresh air; consult doctor in case of complaints.
After skin contact: Remove contaminated clothing. Wash exposed area with soap and water.
After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
After swallowing: Contact physician or poison control center.

5 Fire fighting measures

Extinguishing agents: CO2, sand, extinguishing powder, or water spray. Fight larger fires with water spray or alcohol resistant foam.

Protective equipment: No special measures required.

6 Accidental release measures

Personal safety: Wear protective equipment. Keep unprotected persons away.
Environmental safety: Do not allow product to reach sewage systems or ground water.
Clean-up/collection: Ensure adequate ventilation.

7 Handling and storage

Fire/explosion protection: Do not spray on a naked flame or any incandescent material. Do not smoke. Protect from electrostatic discharges.

Storage requirements: Observe pressurized container storage regulations. Consult with your local authorities.

8 Exposure controls and personal protection:

Components with limit values that require monitoring at the workplace:	
74-98-6 propane	
PEL	1800 mg/m³, 1000 ppm
REL	1800 mg/m³, 1000 ppm
TLV	Varies mg/m³, 1000 ppm

(Contd. on page 2)

Material Safety Data Sheet
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Printing date 06/22/2010 Reviewed on 06/22/2010

Trade name: STRIPE YELLOW TRAFFIC MARKER

(Contd. of page 1)

106-97-8 n-butane	
REL	1900 mg/m³, 800 ppm
TLV	Varies mg/m³, 1000 ppm
7727-43-7 barium sulphate, natural	
PEL	15* 5** mg/m³ *total dust **respirable fraction
REL	10* 5** mg/m³ *total dust **respirable fraction
TLV	10 mg/m³ E

Hygienic protection: Wash hands after use.
Breathing equipment: A respirator is generally not necessary when using this product outdoors or in large open areas. In cases where short and/or long term overexposure exists, a charcoal filter respirator should be worn. If you suspect overexposure conditions exist, please consult an authority on chemical hygeine.
Hand protection: Protective gloves. The glove material has to be impermeable and resistant to the substance. No glove recommendation can be given.
Eye protection: Tightly sealed goggles

9 Physical and chemical properties:

General Information:
Odor: Aromatic
Boiling point: -44°C (-47°F)
Flash point: -19°C (-2°F)
Auto igniting: Product is not self-igniting.
Danger of explosion: Stable at normal temperatures. Can may burst when exposed to temperatures exceeding 120 degrees fahrenheit.
In use, may form flammable/explosive vapour-air mixture.
Lower Explosion Limit: 1.7 Vol %
Upper Explosion Limit: 10.9 Vol %
Vapor Pressure: 40 PSI, 2750 hPa
Density at 20°C (68°F): 0.88 g/cm³
Specific Gravity: Between 0.77 and 0.85 (Water equals 1.00)
VOC content: 516.3 g/l / 4.31 lb/gl
VOC content (less exempt solvents): 48.5 %
Water: 19.1 %
MIR Value: 0.60
Solids content: 31.3 %

10 Stability and reactivity:

Conditions to avoid: Do not allow the can to exceed 120 degrees Fahrenheit. Stable at normal temperatures.
Materials to be avoided:
Hazardous Reactions: No dangerous reactions known.

11 Toxicological information:

Skin effects: No irritant effect.
Eye effects: No irritating effect.
Sensitization: No sensitizing effects known.

12 Ecological information

Other information: This product does not contain any chlorofluorocarbons (CFC's), hydrochlorofluorocarbons (HCFC's), perfluorocarbons (PFC's), or chlorinated solvents.
Aquatic toxicity: Hazardous for water, do not empty into drains.

13 Disposal considerations

DISPOSAL METHOD: Dispose of in accordance with local, state, and federal regulations. Do not puncture, incinerate, or compact. Partially empty cans must be disposed of responsibly. Do not heat or cut empty containers with electric or gas torches.
Recommendation: Completely empty cans should be recycled.

14 Transport information:

Hazard class: 2.1
Identification number: N/A
Label 2.1
ADR/RID/TDG class: 2 5F Gases
UN-Number: 1950
IMDG Class: 2.1

(Contd. on page 3)

Material Safety Data Sheet
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Trade name: STRIPE YELLOW TRAFFIC MARKER

(Contd. of page 2)

Packaging group: II
EMS Number: F-D,S-U
Marine pollutant: No
ICAO/IATA Class: 2.1
Proper shipping name: Aerosols, Flammable
Consumer Commodity ORM-D

15 Regulations

SARA Section 355 (extremely hazardous substances):

None of the ingredients in this product are listed.

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

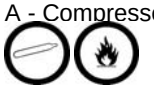
TSCA: All ingredients are listed.
CPSC: This product complies with 16 CFR 1303 and does not contain more than 90 ppm of lead.

California Proposition 65 chemicals known to cause cancer:

100-41-4	ethyl benzene

CANADIAN ENVIRONMENTAL PROTECTION ACT: All hazardous ingredients for this product appear on the Canadian Domestice Substance List.

WHMIS Symbols for Canada: A - Compressed gas



EPA: A= Known human carcinogen B= Probable human carcinogen
C= Possible human carcinogen
D= Not classifiable as to human carcinogenicity: Inadequate human and animal evidence of carcinogenicity (or no data is available).
I: 'Data are inadequate for an assessment of human carcinogeni potential.'
II: 'Inadequate information to assess carcinogenic potential.'

A= Known human carcinogen B= Probable human carcinogen
C= Possible human carcinogen
D= Not classifiable as to human carcinogenicity: Inadequate human and animal evidence of carcinogenicity (or no data is available).

IARC: Group 2A: The ingredient is probably carcinogenic to humans.
Group 2B: The ingredient is possibly carcinogenic to humans. There is limited evidence of carcinogenicity.
Group 3: The ingredient is unclassifiable as to its carcinogenicity to humans.

Group 2A: The ingredient is probably carcinogenic to humans.
Group 2B: The ingredient is possibly carcinogenic to humans. There is limited evidence of carcinogenicity.
Group 3: The ingredient is unclassifiable as to its carcinogenicity to humans.

ACGIH: A1-designates a confirmed human carcinogen.
A2-designates a suspected human carcinogen.
A3-designates an animal carcinogen.
A4-designates "not classifiable as a human carcinogen".

A1-designates a confirmed human carcinogen.
A2-designates a suspected human carcinogen.
A3-designates an animal carcinogen.
A4-designates "not classifiable as a human carcinogen".

NIOSH: The following substances are regulated in the United States with reference to occupational exposure limits:

13463-67-7	titanium dioxide

Risk phrases: Extremely flammable.

Safety phrases: Keep out of the reach of children.
Keep in a cool place.
Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point
If swallowed, seek medical advice immediately and show this container or label.
Use only in well-ventilated areas.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Contact: Regulatory Affairs

Abbreviations and acronyms:
IMDG: International Maritime Code for Dangerous Goods
PP: Severe Marine Pollutant
P: Marine Pollutant
CAS: Chemical Abstracts Service (division of the American Chemical Society)
ISO: International Organization for Standardization
DOT: US Department of Transportation
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
NFPA: National Fire Protection Association (USA)

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Printing date 06/22/2010 Reviewed on 06/22/2010

Trade name: STRIPE YELLOW TRAFFIC MARKER

(Contd. of page 3)

HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
EPA: Environmental Protection Agency
IARC: International Agency for the Research of Cancer
NIOSH: National Institute for Occupational Safety and Health
TSCA: Toxic Substances Control Act
CPSC: Consumer Product Safety Commission

SEYMOUR OF SYCAMORE -- MARKING PAINTS AEROSOL, 20-653 -- 8010-00N085825

========== Product Identification ==========

Product ID:MARKING PAINTS AEROSOL, 20-653
MSDS Date:05/08/1992
FSC:8010
NIIN:00N085825
MSDS Number: CHCYN
=== Responsible Party ===
Company Name:SEYMOUR OF SYCAMORE
Address:917 CROSBY AVE
City:SYCAMORE
State:IL
ZIP:60178
Country:US
Info Phone Num:815-895-9101
Emergency Phone Num:815-895-9101
CAGE:59581
=== Contractor Identification ===
Company Name:SEYMOUR OF SYCAMORE
Address:917 CROSBY AVE.
Box:City:SYCAMORE
State:IL
ZIP:60178-1343
Country:US
Phone:815-895-9101/800-255-3924
CAGE:59581

========== Composition/Information on Ingredients ==========

Ingred Name:HEXANE; (N-HEXANE) (CERCLA). LEL:1.2%. %:1.77-21.19.
CAS:110-54-3
RTECS #:MN9275000
Fraction by Wt: <21.19%
OSHA PEL:500 PPM
ACGIH TLV:50 PPM
EPA Rpt Qty:1 LB
DOT Rpt Qty:1 LB

Ingred Name:METHANOL; (METHYL ALCOHOL) (SARA 313) (CERCLA). LEL:6%.
%:0.13-6.05.
CAS:67-56-1
RTECS #:PC1400000
Fraction by Wt: <6.05%
OSHA PEL:200 PPM, S
ACGIH TLV:200 PPM;250 STEL, S
EPA Rpt Qty:5000 LBS
DOT Rpt Qty:5000 LBS

Ingred Name:SOLVENT NAPHTHA, PETROLEUM, MEDIUM ALIPHATIC; (MINERAL
SPIRITS). LEL:0.7%. %:0.61-21.77.
CAS:64742-88-7
RTECS #:WF3450000
Fraction by Wt: <21.77%
OSHA PEL:100 PPM (MFR)
ACGIH TLV:100 PPM (MFR)

Ingred Name:TITANIUM OXIDE; (TITANIUM DIOXIDE). %:0.11-15.26.

CAS:13463-67-7
RTECS #:XR2275000
Fraction by Wt: <15.26%
OSHA PEL:15 MG/M3 TDUST
ACGIH TLV:10 MG/M3 TDUST

Ingred Name:TOLUENE (SARA 313) (CERCLA). %:3.92-19.75.
CAS:108-88-3
RTECS #:XS5250000
Fraction by Wt: <19.75%
OSHA PEL:200 PPM
ACGIH TLV:50 PPM, S
EPA Rpt Qty:1000 LBS
DOT Rpt Qty:1000 LBS

Ingred Name:LIGROINE; (VARNISH MAKERS & PAINTERS NAPHTHA). %:0.1-13.18.
LEL:1.1%.
CAS:8032-32-4
RTECS #:OI6180000
Fraction by Wt: <13.18%
OSHA PEL:300 PPM
ACGIH TLV:300 PPM

Ingred Name:XYLENE (SARA 313) (CERCLA). %:1.89-22.71. LEL:1%.
CAS:1330-20-7
RTECS #:ZE2100000
Fraction by Wt: <22.71%
OSHA PEL:100 PPM
ACGIH TLV:100 PPM;150 STEL
EPA Rpt Qty:1000 LBS
DOT Rpt Qty:1000 LBS

Ingred Name:BENZENE, ETHYL-; (ETHYL BENZENE) (SARA 313). %:0.47-5.67.
LEL:1.2%.
CAS:100-41-4
RTECS #:DA0700000
Fraction by Wt: <5.67%
OSHA PEL:100 PPM
ACGIH TLV:100 PPM;125 STEL
EPA Rpt Qty:1000 LBS
DOT Rpt Qty:1000 LBS

Ingred Name:COPPER, (PHTHALOCYANINATO(2-))-; (PHTHALOCYANINE BLUE)
(CONTAINING ING 10). %:0.21-0.33.
CAS:147-14-8
RTECS #:GL8510000
Fraction by Wt: <0.33%
OSHA PEL:15 MG/M3 (MFR)
ACGIH TLV:10 MG/M3 (MFR)

Ingred Name:COPPER; (NON-IONIC COPPER) (SARA 313) (CERCLA)
CAS:7440-50-8
RTECS #:GL5325000
Fraction by Wt: 11%
OSHA PEL:0.1MG/M3 FUME;1 DUST
ACGIH TLV:0.2 MG/M3 FUME
EPA Rpt Qty:5000 LBS
DOT Rpt Qty:5000 LBS

Ingred Name:PROPANE. %:8.9-18.7. LEL:2.3%.

CAS:74-98-6
RTECS #:TX2275000
Fraction by Wt: <18.7%
OSHA PEL:1000 PPM
ACGIH TLV:ASPHYXIANT

Ingred Name:PROPANE, 2-METHYL-; (ISOBUTANE). LEL:1.9%.
CAS:75-28-5
RTECS #:TZ4300000
Fraction by Wt: 6-12.5%
OSHA PEL:N/K
ACGIH TLV:N/K

Ingred Name:SUPDAT:IRREVERSIBLE. METHYL ALCOHOL:TOX EFTS FROM RPTD
OVEREXP ARE ACCUM & EFT CNS, ESP OPTIC NERVE. MAY BE (ING 14)
RTECS #:9999999ZZ

Ingred Name:ING 13:FATAL/CAUSE BLINDNESS IF INGESTED. CANNOT BE MADE
NON-POIS. LIVER DMG HAS RSLTD FROM PRLNG/RPTD INHAL OF (ING 15)
RTECS #:9999999ZZ

Ingred Name:ING 14:VAPS. INHAL OF HIGH CONCS FOR PRLNG PERIODS HAS
RSLTD IN DEATH. MINERAL SPIRITS:NARCOS IN HIGH CONC. MAY (ING 16)
RTECS #:9999999ZZ

Ingred Name:ING 15:CAUSE SKIN IRRIT. TOLUENE:ANIMAL STUDIES HAVE SHOWN
INHAL OF HIGH LEVELS PRDCD CARD SENSIT. SUCH SENSIT (ING 17)
RTECS #:9999999ZZ

Ingred Name:ING 16:MAY CAUSE FATAL CHANGES IN HEART RHYTHMS. RATS EXPOS
TO HIGH VAP CONCS EXHIBITED HIGH FREQUENCY HEARING (ING 18)
RTECS #:9999999ZZ

Ingred Name:ING 17:DEFICITS. XYLENE:ANIMAL TEST STUDIES HAVE SHOWN POSS
EFTS TO LIVER, KIDNEYS, LUNGS & EMBRYO/FETOTOXIC (ING 19)
RTECS #:9999999ZZ

Ingred Name:ING 18:EFTS. HIGH VAP CONCS ARE IRRIT TO EYES & RESP TRACT,
MAY CAUSE HDCHS & DIZZ, ARE ANESTH & MAY HAVE OTHER (ING 20)
RTECS #:9999999ZZ

Ingred Name:ING 19:NERV SYS EFTS INCL DEATH. ETHYL BENZENE:MAY CAUSE
SEV EYE IRRIT, SKIN IRRIT, NASAL & RESP IRRIT. CNS (ING 21)
RTECS #:9999999ZZ

Ingred Name:ING 20:EFTS, UNCON & EVEN DEATH. CAN CAUSE GI IRRIT. ASPIR
INTO LUNGS CAN CAUSE CHEM PNEUM WHICH CAN BE FATAL. (ING 22)
RTECS #:9999999ZZ

Ingred Name:ING 21:PHTHALOCYANINE BLUE:OVEREXP TO DUST MAY CAUSE IRRIT
TO NOSE, THROAT & LUNGS. MAY CAUSE IRRIT TO SKIN & (ING 23)
RTECS #:9999999ZZ

Ingred Name:ING 22:EYES. LG QTYS MAY CAUSE IRRIT TO MOUTH, THROAT & GI
TRACT RSLTG IN NAUS & VOMIT. VARNISH MAKERS & (ING 24)
RTECS #:9999999ZZ

Ingred Name:ING 23:PAINTER'S NAPHTHA:OVEREXP MAY CAUSE SKIN IRRIT UPON
PRLNG/RPTD CONT. CNS DEPRESS IN HIGH CONCS. FOR MORE (ING 25)
RTECS #:9999999ZZ

Ingred Name:ING 24:COMPLETE HEALTH HAZARD INFORMATION CONTACT NEHC .
RTECS #:9999999ZZ

Hazards Identification

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.
Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:ACUTE:INHAL:EXPOS TO SOLV VAPS CONC EXCEEDING ESTABLISHED TLV CAN CAUSE RESP SYS IRRIT. SYMPS OF OVEREXP ARE IRRIT, HDCH, DIZZ, NAUS, POSS UNCON & ASPHY. EYE CONT:MAY CAUSE IRRIT ESP UPON DIRECT CONT W/SPRAY. SKIN CONT:PRLNG/RPTD LIQ CONT MAY CAUSE DEFAT, LEADING TO IRRIT & DERM. INGEST:ACCIDENTAL (EFTS OF OVEREXP)
Explanation of Carcinogenicity:NOT RELEVANT
Effects of Overexposure:HLTH HAZ:INGEST IS UNLIKELY FROM AEROSOL CAN. INTENTIONAL MISUSE BY DELIB CONC VAPS & INHAL CONTENTS CAN BE HARMFUL/FATAL. CHRONIC:NOTE:TOLUENE APPEARS ON NAVY LIST OF OCCUP CHEM REPRO HAZS. SEEK CONS ULTATION FROM APPROP HLTH PROFESSIONALSCONCERNING LATEST HAZ LIST INFO & SAFE HNDLG & EXPOS INFO. HEXANE:(SUPDAT)
Medical Cond Aggravated by Exposure:NONE SPECIFIED BY MANUFACTURER.

First Aid Measures

First Aid:INHAL:REMOVE PATIENT TO FRESH AIR. IF BREATHING STOPS, BEGIN ARTIFICIAL RESPIRATION. SEEK IMMEDIATE MEDICAL ATTENTION. EYES:IMMEDIATELY FLUSH W/PLENTY OF WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATT ENTION. SKIN:WASH W/SOAP & WATER. INGEST:CALL MD IMMEDIATELY.

Fire Fighting Measures

Flash Point Method:TOC
Flash Point:-10F,-23C
Lower Limits:0.7% & INGS
Upper Limits:9.5%
Extinguishing Media:USE CARBON DIOXIDE, DRY CHEMICAL OR FOAM.
Fire Fighting Procedures:USE NIOSH APPRVD SCBA & FULL PROT EQUIP. WATER SPRAY MAY BE INEFT. WATER MAY BE USED TO COOL CNTNRS TO PVNT BURSTING. IF WATER IS USED, FOG NOZZ ARE PREF.
Unusual Fire/Explosion Hazard:OSHA FLAMMABILITY CLASS:1A (FLASH POINT <73F,<23C & BOILING POINT <100F,<38C).

Accidental Release Measures

Spill Release Procedures:REMOVE ALL SOURCES OF IGNITION, AVOID BREATHING VAPORS, VENTILATE AREA. WIPE UP W/INERT MATERIALS & PLACE IN APPROPRIATE CONTAINER.
Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

Handling and Storage

Handling and Storage Precautions:DO NOT STORE ABOVE 120F. EXPOSURE TO HEAT OR PROLONGED EXPOSURE TO SUN MAY CAUSE BURSTING.
Other Precautions:USE ONLY AS DIRECTED.

Exposure Controls/Personal Protection

Respiratory Protection:AVOID CONTINUOUS BREATHING OF VAPORS & SPRAY MIST, A NIOSH APPROVED SELF CONTAINED BREATHING APPARATUS REQUIRED FOR CONCENTRATIONS ABOVE TLV LIMITS.
Ventilation:USE W/ADEQUATE VENTILATION, SUFFICIENT TO PREVENT INHALATION OF SOLVENT VAPORS.
Protective Gloves:IMPERVIOUS GLOVES .
Eye Protection:ANSI APPROVED CHEM WORKERS GOGGS .
Other Protective Equipment:EYE WASH FOUNTAIN & DELUGE SHOWER WHICH MEET ANSI DESIGN CRITERIA .
Work Hygienic Practices:NONE SPECIFIED BY MANUFACTURER.
Supplemental Safety and Health
VP:AEROSOL CAN-40 PSIA @ 70F. HAZ DECOMP PROD:IN ADDN MAY INCL SEV EYE, SKIN & RESP IRRITS, SUCH AS PHOSGENE, HYDROGEN CHLORIDE & CHLORINATED ACIDS, ALDEHYDES & KETONES. EFTS OF OVEREXP:OVEREXP REPRES ENTS DISTINCT HAZ OF PRDCG PERIPHERAL POLYNEUROPATHY, PROGRESSIVE DISORDER OF NERV SYS. HAS POTNTL OF BECOMING (ING 13)

Physical/Chemical Properties

Boiling Pt:B.P. Text:<100F,<38C
Vapor Pres:SUPP DATA
Vapor Density:HVR/AIR
Spec Gravity:0.74-0.99
Evaporation Rate & Reference:FASTER THAN ETHER
Solubility in Water:INSOLUBLE
Appearance and Odor:PAINT; SOLVENT ODOR.
Percent Volatiles by Volume:85

Stability and Reactivity Data

Stability Indicator/Materials to Avoid:YES
STRONG OXIDIZING AGENTS.
Stability Condition to Avoid:DO NOT STORE ABOVE 120F. KEEP FROM SPARKS, PILOT LIGHTS OR OPEN FLAME.
Hazardous Decomposition Products:MAY PRDCE HAZ FUMES WHEN HEATED TO DECOMP. FUMES MAY CONTAIN CARBON DIOXIDE &/OR CARBON MONOXIDE. STRIPE PLUS, (SUPDAT)

Disposal Considerations

Waste Disposal Methods:DO NOT INCINERATE AEROSOL, DISPOSE OF I/A/W LOCAL, STATE & FEDERAL REGULATIONS. DO NOT PLACE AEROSOL CANS IN HOME COMPACTOR. DO NOT PUNCTURE.

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Safety Data Sheet
acc. to OSHA HCS

Printing date 12/10/2013 Revised On 12/03/2013

1 Identification of the substance and manufacturer

Trade name: STRIPE FLUORESCENT ORANGE

Product code: 0000200657

Manufacturer/Supplier: Seymour of Sycamore
917 Crosby Avenue
Sycamore, IL 60178
Phone: 815-895-9101
www.seymourpaint.com

Emergency telephone number: CHEMTEL 1-800-255-3924, 813-248-0585 *if located outside the U.S.*

2 Composition/information on ingredients

Chemical Description: This product is a mixture of the substances listed below with nonhazardous additions.

Dangerous components:

64742-89-8	VM&P Naphtha	18.98%
74-98-6	propane	15.13%
1317-65-3	Calcium Carbonate	11.75%
106-97-8	n-butane	8.88%
64742-47-8	Mineral Spirits	3.85%
110-19-0	isobutyl acetate	3.2%

3 Hazard(s) identification

Hazard Information for people and the environment: Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.
Extremely flammable liquid and vapor in a pressurized container. Keep away from heat, sparks, and flame.
Has narcotizing effect.

Risk phrases: Extremely flammable.

Safety phrases: Keep locked up and out of the reach of children.
Keep away from sources of ignition - No smoking.
Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point
If swallowed, seek medical advice immediately and show this container or label.

Effects of chronic overexposure: May cause permanent brain and nervous system damage. Repeated overexposure can also damage kidneys, lungs, liver, heart, and blood. Intentional misuse by deliberately inhaling the contents may be harmful or fatal.

NFPA ratings (0 - 4):
Health- 1
Fire- 3
Reactivity- 3

HMIS-ratings (0 - 4):
Health- 1
Flammability- 3
Physical Hazard- 3

4 First-aid measures

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact: Remove contaminated clothing. Wash exposed area with soap and water.

After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing: Contact physician or poison control center.

5 Fire-fighting measures

Extinguishing agents: CO_2, sand, extinguishing powder, or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special hazards: No further relevant information available.

Protective equipment for firefighters: No special measures required.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures: Wear protective equipment. Keep unprotected persons away.

Environmental precautions: Do not allow product to reach sewage systems or ground water.

Methods and material for containment and cleaning up: Ensure adequate ventilation.

7 Handling and storage

Fire/explosion protection: Do not spray on a naked flame or any incandescent material. Do not smoke. Protect from electrostatic discharges.

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/10/2013 Revised On 12/03/2013

Trade name: STRIPE FLUORESCENT ORANGE

(Contd. of page 1)

Storage requirements: Observe pressurized container storage regulations. Consult with your local authorities.

8 Exposure controls/personal protection

Components with limit values that require monitoring at the workplace:

74-98-6 propane	
PEL	Long-term value: 1800 mg/m³, 1000 ppm
REL	Long-term value: 1800 mg/m³, 1000 ppm
TLV	refer to Appendix F: minimal oxygen content
106-97-8 n-butane	
REL	Long-term value: 1900 mg/m³, 800 ppm
TLV	Short-term value: 2370 mg/m³, 1000 ppm
110-19-0 isobutyl acetate	
PEL	Long-term value: 700 mg/m³, 150 ppm
REL	Long-term value: 700 mg/m³, 150 ppm
TLV	Long-term value: 713 mg/m³, 150 ppm

Hygienic protection: Keep away from foodstuffs and animal feed. Wash hands after use.

Breathing equipment: A respirator is generally not necessary when using this product outdoors or in large open areas. In cases where short and/or long term overexposure exists, a charcoal filter respirator should be worn. If you suspect overexposure conditions exist, please consult an authority on chemical hygeine.

Hand protection: Protective gloves. The glove material must be impermeable and resistant to the substance. No glove recommendation can be given.

Eye protection: Tightly sealed goggles

9 Physical and chemical properties

Odor: Aromatic

pH-value: Not determined.

Boiling point: -44 °C (-47 °F)

Flash point: -19 °C (-2 °F)

Auto igniting: Product is not self-igniting.

Danger of explosion: Stable at normal temperatures. Can may burst when exposed to temperatures exceeding 120 degrees fahrenheit.
In use, may form flammable/explosive vapour-air mixture.

Lower Explosion Limit: 1.7 Vol %

Upper Explosion Limit: 10.9 Vol %

Vapor Pressure: 40 PSI, 2750 hPa

Specific Gravity: Between 0.77 and 0.85 (Water equals 1.00)

VOC content: 525.6 g/l / 4.39 lb/gl

VOC content (less exempt solvents): 50.5 %

Water: 24.3 %

MIR Value: 0.57

Solids content: 24.2 %

Other information No further relevant information available.

10 Stability and reactivity

Conditions to avoid: Do not allow the can to exceed 120 degrees Fahrenheit. Stable at normal temperatures.

Hazardous decomposition: No dangerous decomposition products known.

11 Toxicological information

Skin effects: No irritant effect.

Eye effects: No irritating effect.

Sensitization: No sensitizing effects known.

Additional toxicological information:

Carcinogenic categories

IARC (International Agency for Research on Cancer)
None of the ingredients is listed.
NTP (National Toxicology Program)
None of the ingredients is listed.

12 Ecological information

Aquatic toxicity: Hazardous for water, do not empty into drains.

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/10/2013 Revised On 12/03/2013

Trade name: STRIPE FLUORESCENT ORANGE

(Contd. of page 2)

Other information: This product does not contain any chlorofluorocarbons (CFC's), hydrochlorofluorocarbons (HCFC's), perfluorocarbons (PFC's), or chlorinated solvents.

13 Disposal considerations

Dispose of in accordance with local, state, and federal regulations. Do not puncture, incinerate, or compact. Partially empty cans must be disposed of responsibly. Do not heat or cut empty containers with electric or gas torches.

Recommendation: Completely empty cans should be recycled.

14 Transport information

UN-Number	UN1950
DOT	Consumer Commodity ORM-D AEROSOLS, flammable
Class	2.1
Marine pollutant:	No
EMS Number:	F-D,S-U
Packaging Group:	--

15 Regulatory information

SARA Section 355 (extremely hazardous substances):

None of the ingredients in this product are listed.

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

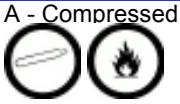
TSCA: All ingredients are listed.

CPSC: This product complies with 16 CFR 1303 and does not contain more than 90 ppm of lead.

California Proposition 65 chemicals known to cause cancer:

100-41-4	ethyl benzene

WHMIS Symbols for Canada: A - Compressed gas



EPA:

110-19-0	isobutyl acetate	D

ACGIH:

110-19-0	isobutyl acetate	A4

NIOSH:

The following substances are regulated in the United States with reference to occupational exposure limits:

16 Other information

This product was manufactured in the U.S.A.

The information on this sheet is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Contact: Regulatory Affairs

Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
TSCA: Toxic Substances Control Act
CPSC: Consumer Product Safety Commission
EPA: Environmental Protection Agency
IARC: International Agency for the Research of Cancer
NIOSH: National Institute for Occupational Safety and Health

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/10/2013 Revised On 12/03/2013

1 Identification of the substance and manufacturer

Trade name: STRIPE HOT PINK FLUORESCENT

Product code: 0000200679

Manufacturer/Supplier: Seymour of Sycamore
917 Crosby Avenue
Sycamore, IL 60178
Phone: 815-895-9101
www.seymourpaint.com

Emergency telephone number: CHEMTEL 1-800-255-3924, 813-248-0585 *if located outside the U.S.*

2 Composition/information on ingredients

Chemical Description: This product is a mixture of the substances listed below with nonhazardous additions.

Dangerous components:

64742-89-8	VM&P Naphtha	19.27%
74-98-6	propane	15.13%
1317-65-3	Calcium Carbonate	11.61%
106-97-8	n-butane	8.88%
64742-47-8	Mineral Spirits	3.74%
110-19-0	isobutyl acetate	3.26%

3 Hazard(s) identification

Hazard Information for people and the environment: Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.
Extremely flammable liquid and vapor in a pressurized container. Keep away from heat, sparks, and flame.
Has narcotizing effect.

Risk phrases: Extremely flammable.

Safety phrases: Keep locked up and out of the reach of children.
Keep away from sources of ignition - No smoking.
Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point
If swallowed, seek medical advice immediately and show this container or label.

Effects of chronic overexposure: May cause permanent brain and nervous system damage. Repeated overexposure can also damage kidneys, lungs, liver, heart, and blood. Intentional misuse by deliberately inhaling the contents may be harmful or fatal.

NFPA ratings (0 - 4):
Health- 1
Fire- 3
Reactivity- 3

HMIS-ratings (0 - 4):
Health- 1
Flammability- 3
Physical Hazard- 3

4 First-aid measures

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact: Remove contaminated clothing. Wash exposed area with soap and water.

After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing: Contact physician or poison control center.

5 Fire-fighting measures

Extinguishing agents: CO_2, sand, extinguishing powder, or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special hazards: No further relevant information available.

Protective equipment for firefighters: No special measures required.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures: Wear protective equipment. Keep unprotected persons away.

Environmental precautions: Do not allow product to reach sewage systems or ground water.

Methods and material for containment and cleaning up: Ensure adequate ventilation.

7 Handling and storage

Fire/explosion protection: Do not spray on a naked flame or any incandescent material. Do not smoke. Protect from electrostatic discharges.

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Printing date 12/10/2013 Revised On 12/03/2013

Trade name: STRIPE HOT PINK FLUORESCENT

(Contd. of page 1)

Storage requirements: Observe pressurized container storage regulations. Consult with your local authorities.

8 Exposure controls/personal protection

Components with limit values that require monitoring at the workplace:

74-98-6 propane	
PEL	Long-term value: 1800 mg/m³, 1000 ppm
REL	Long-term value: 1800 mg/m³, 1000 ppm
TLV	refer to Appendix F: minimal oxygen content
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Hygienic protection: Keep away from foodstuffs and animal feed. Wash hands after use.

Breathing equipment: A respirator is generally not necessary when using this product outdoors or in large open areas. In cases where short and/or long term overexposure exists, a charcoal filter respirator should be worn. If you suspect overexposure conditions exist, please consult an authority on chemical hygeine.

Hand protection: Protective gloves. The glove material must be impermeable and resistant to the substance. No glove recommendation can be given.

Eye protection: Tightly sealed goggles

9 Physical and chemical properties

Odor: Aromatic

pH-value: Not determined.

Boiling point: -44 °C (-47 °F)

Flash point: -19 °C (-2 °F)

Auto igniting: Product is not self-igniting.

Danger of explosion: Stable at normal temperatures. Can may burst when exposed to temperatures exceeding 120 degrees fahrenheit.
In use, may form flammable/explosive vapour-air mixture.

Lower Explosion Limit: 1.7 Vol %

Upper Explosion Limit: 10.9 Vol %

Vapor Pressure: 40 PSI, 2750 hPa

Specific Gravity: Between 0.77 and 0.85 (Water equals 1.00)

VOC content: 529.1 g/l / 4.42 lb/gl

VOC content (less exempt solvents): 50.7 %

Water: 24.8 %

MIR Value: 0.58

Solids content: 23.4 %

Other information No further relevant information available.

10 Stability and reactivity

Conditions to avoid: Do not allow the can to exceed 120 degrees Fahrenheit. Stable at normal temperatures.

Hazardous decomposition: No dangerous decomposition products known.

11 Toxicological information

Skin effects: No irritant effect.

Eye effects: No irritating effect.

Sensitization: No sensitizing effects known.

Additional toxicological information:

Carcinogenic categories

IARC (International Agency for Research on Cancer)
None of the ingredients is listed.
NTP (National Toxicology Program)
None of the ingredients is listed.

12 Ecological information

Aquatic toxicity: Hazardous for water, do not empty into drains.

(Contd. on page 3)

Safety Data Sheet
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Printing date 12/10/2013 Revised On 12/03/2013

Trade name: STRIPE HOT PINK FLUORESCENT

(Contd. of page 2)

Other information: This product does not contain any chlorofluorocarbons (CFC's), hydrochlorofluorocarbons (HCFC's), perfluorocarbons (PFC's), or chlorinated solvents.

13 Disposal considerations

Dispose of in accordance with local, state, and federal regulations. Do not puncture, incinerate, or compact. Partially empty cans must be disposed of responsibly. Do not heat or cut empty containers with electric or gas torches.

Recommendation: Completely empty cans should be recycled.

14 Transport information

UN-Number UN1950
DOT Consumer Commodity ORM-D
AEROSOLS, flammable
Class 2.1
Marine pollutant: No
EMS Number: F-D,S-U
Packaging Group: --

15 Regulatory information

SARA Section 355 (extremely hazardous substances):

None of the ingredients in this product are listed.

SARA Section 313 (Specific toxic chemical listings):

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TSCA: All ingredients are listed.
CPSC: This product complies with 16 CFR 1303 and does not contain more than 90 ppm of lead.

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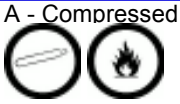
100-41-4	ethyl benzene

WHMIS Symbols for Canada: A - Compressed gas



EPA:

110-19-0	isobutyl acetate	D

ACGIH:

110-19-0	isobutyl acetate	A4

NIOSH:

The following substances are regulated in the United States with reference to occupational exposure limits:

16 Other information

This product was manufactured in the U.S.A.
The information on this sheet is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
TSCA: Toxic Substances Control Act
CPSC: Consumer Product Safety Commission
EPA: Environmental Protection Agency
IARC: International Agency for the Research of Cancer
NIOSH: National Institute for Occupational Safety and Health

SHAKEDOWN: PUREX INDUSTRIAL

========== 1. Product Identification ==========

Product ID:SHAKEDOWN
MSDS Date:09/23/1985
Tech Review:11/08/1988
FSC:7930
NIIN:LIIN:00F007556
Submitter:F BT
MFN:01
=== Responsible Party ===
Company Name:PUREX INDUSTRIAL
Address:24600 S. MAIN STREET
City:CARSON
State:CA
ZIP:90749
Info Phone Num:(213) 634-3300
Emergency Phone Num:(213) 634-3300
Review Ind:Y
Published:Y
CAGE:1E740
=== Preparer Co. other than Responsible Party Co. ===
Company Name:PUREX INDUSTRIAL
Address:7300 BOLSA AVE
City:WESTMINSTER
State:CA
ZIP:92684-3600
CAGE:1E740
=== Contractor Identification ===
Company Name:PUREX INDUSTRIAL
Address:7300 BOLSA AVE
Box:City:WESTMINSTER
State:CA
ZIP:92684-3600
Country:US
Phone:714-890-3600
CAGE:1E740
=== Item Description Information ===
Item Name:SULFUR
Type of Container:

========== 2. Composition/Information on Ingredients ==========

Ingred Name:NON-HAZARDOUS FOR INGREDIENTS
Fraction by Wt: 100%
Other REC Limits:N/R
OSHA PEL:N/R
ACGIH TLV:N/R
Ozone Depleting Chemical:

========== 3. Hazards Identification ==========

=Routes of Entry=
Inhalation:NO
Skin:YES
Ingestion:YES
=Reports of Carcinogenicity=

NTP:NO
IARC:NO
OSHA:NO
Health Hazards Acute and Chronic:SKIN & EYES: SLIGHT IRRITANT. INGESTION: SLIGHTLY TOXIC.
Explanation of Carcinogenicity:NONE
Effects of Overexposure:SKIN & EYES: SLIGHT IRRITANT. INGESTION: SLIGHTLY TOXIC.
Medical Cond Aggravated by Exposure:N/R

========== 4. First Aid Measures ==========

First Aid:SKIN & EYES: FLUSH WITH WATER. INGESTION: GIVE SEVERAL GLASSES OF WATER.

========== 5. Fire Fighting Measures ==========

Flash Point:Flash Point Text:N/R
Lower Limits:N/R
Upper Limits:N/R
Extinguishing Media:NONE REQUIRED
Fire Fighting Procedures:NONE
Unusual Fire/Explosion Hazard:NONE

========== 6. Accidental Release Measures ==========

Spill Release Procedures:SWEEP UP SPILLAGE & PLACE IN SUITABLE CONTAINERS.
Neutralizing Agent:N/R

========== 7. Handling and Storage ==========

Handling and Storage Precautions:NORMAL HANDLING PROCESSES; INSIDE STORAGE AT 40-100F. RECOMMENDED.
Other Precautions:A PROGRAM OF REGULAR CLEANING, REPAIRING & REPLACING OF WORN-OUT PARTS & CONTAMINATED EQUIPMENT IS HIGHLY DESIRABLE.

========== 8. Exposure Controls/Personal Protection ==========

Respiratory Protection:NONE REQUIRED
Ventilation:LOCAL EXHAUST: NORMAL RATE
Protective Gloves:RUBBER OR VINYL
Eye Protection:NONE
Other Protective Equipment:NONE
Work Hygienic Practices:WASH HANDS AFTER HANDLING. DON'T REUSE CLOTHING WETTED WITH PRODUCT BEFORE CLOTHING IS LAUNDERED.
Supplemental Safety and Health

========== 9. Physical/Chemical Properties ==========

Boiling Pt:B.P. Text:N/R
Melt/Freeze Pt:M.P/F.P Text:N/R
Decomp Temp:Decomp Text:N/R
Spec Gravity:N/R
pH:N/R
Evaporation Rate & Reference:N/R
Solubility in Water:N/R
Appearance and Odor:WHITE POWDER, SEABREEZE ODOR
Percent Volatiles by Volume:2%
Corrosion Rate:N/R

========== 10. Stability and Reactivity Data ==========

Stability Indicator/Materials to Avoid:YES
NONE
Hazardous Decomposition Products:NONE
Hazardous Polymerization Indicator:NO

========== 11. Toxicological Information ==========

========== 12. Ecological Information ==========

========== 13. Disposal Considerations ==========

Waste Disposal Methods:BURY AND/OR IN FULL ACCORDANCE WITH FEDERAL, STATE & LOCAL ORDINANCES.

========== 14. MSDS Transport Information ==========

========== 15. Regulatory Information ==========

========== 16. Other Information ==========

==========

Disclaimer (provided with this information by the compiling agencies): This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever, expressly or implied, warrants this information to be accurate and disclaims all liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.

MATERIAL SAFETY DATA SHEET

50.05500-
01 00

DATE OF PREPARATION
May 3, 2011

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
50.05500-
PRODUCT NAME
H&C® Shark Grip
MANUFACTURER'S NAME
H&C CONCRETE STAINS
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

No ingredients in this product are hazardous as defined by the Department of Labor.

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	1
Flammability	0
Reactivity	0

ROUTES OF EXPOSURE
EYE or SKIN contact with product.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	N.A.	N.A.	Not Applicable

EXTINGUISHING MEDIA
Carbon Dioxide, Dry Chemical, Foam
UNUSUAL FIRE AND EXPLOSION HAZARDS
Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.
SPECIAL FIRE FIGHTING PROCEDURES
Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Required for long or repeated contact.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	7.48 lb/gal	896 g/l
SPECIFIC GRAVITY	0.90	
BOILING POINT	Not Applicable	
MELTING POINT	Not Available	
VOLATILE VOLUME	0%	
EVAPORATION RATE	N.A.	
VAPOR DENSITY	N.A.	
SOLUBILITY IN WATER	N.A.	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.00 lb/gal	0 g/l	Less Water and Federally Exempt Solvents
0.00 lb/gal	0 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

TOXICOLOGY DATA

No LC50 or LD50 data available.

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

Information is not Available

Canada (TDG)

Information is not Available

IMO

Information is not Available

IATA/ICAO

Information is not Available

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element

No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

SAFETY DATA SHEET

1. Identification

Product identifier **SHEETROCK® Brand All Purpose Joint Compound, Ready-Mixed**

Other means of identification

SDS number 61000010001

Synonyms Joint Compound (Ready-Mixed) , Taping Compound, Mud, Finishing Compound

Recommended use Interior use.

Recommended restrictions Use in accordance with manufacturer's recommendations.

Manufacturer/Importer/Supplier/Distributor information

Company name United States Gypsum Company

Address 550 West Adams Street
Chicago, Illinois 60661-3637

Telephone 1-800-874-4968

Website www.usg.com

Emergency phone number 1-800-507-8899

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement None.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response Get medical attention/advice if you feel unwell.

Storage Store as indicated in Section 7.

Disposal Dispose of in accordance with local, state, and federal regulations.

Hazard(s) not otherwise classified (HNOC) None known.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Limestone	1317-65-3	> 35
Attapulgite	12174-11-7	< 5
Mica	12001-26-2	< 5
Talc	14807-96-6	< 5

Composition comments All concentrations are in percent by weight unless ingredient is a gas.

Industrial hygiene studies by USG Corporation and governmental agencies did not detect airborne respirable crystalline silica during activities associated with the normal use of this product. However, job site air monitoring should be conducted to determine actual exposure when permissible exposure limits may be exceeded.

4. First-aid measures

Inhalation	Dust irritates the respiratory system, and may cause coughing and difficulties in breathing. Move injured person into fresh air and keep person calm under observation. Get medical attention if symptoms persist.
Skin contact	Contact with dust: Rinse area with plenty of water. Get medical attention if irritation develops or persists.
Eye contact	Dust in the eyes: Do not rub eyes. Flush thoroughly with water. If irritation occurs, get medical assistance.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Dust may irritate eyes and mucous membranes of the nose, throat and upper respiratory system causing sneezing and/or coughing. May cause allergic skin disorders in sensitive individuals.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved.

5. Fire-fighting measures

Suitable extinguishing media	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	Not applicable.
Specific hazards arising from the chemical	Not a fire hazard.
Special protective equipment and precautions for firefighters	Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Use standard firefighting procedures and consider the hazards of other involved materials.
Specific methods	Cool material exposed to heat with water spray and remove it if no risk is involved.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	See Section 8 of the SDS for Personal Protective Equipment.
Methods and materials for containment and cleaning up	Large Spills: Scoop spilled materials and recover as much of the product as possible for use. If spillage is unrecoverable dispose according to local, state, and federal regulations. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
Environmental precautions	Avoid discharge to drains, sewers, and other water systems.

7. Handling and storage

Precautions for safe handling	Avoid inhalation of dust and contact with skin and eyes. Minimize dust generation and accumulation. In case of insufficient ventilation, wear suitable respiratory equipment. Observe good industrial hygiene practices. Use proper lifting techniques.
Conditions for safe storage, including any incompatibilities	Store in a cool, dry, well-ventilated place. Store in a closed container away from incompatible materials. Protect from moisture. Keep away from heat. Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Keep containers closed when not in use. Filled 4.5 gallon pails of joint compound may be stacked a maximum of 3 layers high on a standard 48 x 48 pallet (16 pails per layer, 3 layers high). Pallets may only be stacked a maximum of two high. Filled cartons of joint compound may be stacked a maximum of 3 layers high on a standard 42 x 42 or 42 x 48 pallet (16 pails per layer, 3 layers high). Pallets may only be stacked a maximum of two high.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Limestone (CAS 1317-65-3)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Mica (CAS 12001-26-2)	TWA	20 mppcf	
Talc (CAS 14807-96-6)	TWA	0.3 mg/m3	Total dust.
		0.1 mg/m3	Respirable.
		20 mppcf	
		2.4 mppcf	Respirable.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Mica (CAS 12001-26-2)	TWA	3 mg/m3	Respirable fraction.
Talc (CAS 14807-96-6)	TWA	2 mg/m3	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Limestone (CAS 1317-65-3)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Mica (CAS 12001-26-2)	TWA	3 mg/m3	Respirable.
Talc (CAS 14807-96-6)	TWA	2 mg/m3	Respirable.

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Provide sufficient ventilation for operations causing dust formation. Observe occupational exposure limits and minimize the risk of exposure.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear approved safety goggles.

Skin protection

Hand protection It is a good industrial hygiene practice to minimize skin contact. For prolonged or repeated skin contact use suitable protective gloves.

Other Normal work clothing (long sleeved shirts and long pants) is recommended.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a NIOSH/MSHA approved air purifying respirator as needed to control exposure. Consult with respirator manufacturer to determine respirator selection, use, and limitations. Use positive pressure, air-supplied respirator for uncontrolled releases or when air purifying respirator limitations may be exceeded. Follow respirator protection program requirements (OSHA 1910.134 and ANSI Z88.2) for all respirator use.

Thermal hazards None.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment separately from regular wash. Observe any medical surveillance requirements.

9. Physical and chemical properties

Appearance

Physical state Semi-solid.

Form Paste.

Color Off-white.

Odor Low to no odor.

Odor threshold Not applicable.

pH 7.5 - 9.9

Melting point/freezing point Not applicable.

Initial boiling point and boiling range	212 °F (100 °C)
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not applicable.
Flammability limit - upper (%)	Not applicable.
Explosive limit - lower (%)	Not applicable.
Explosive limit - upper (%)	Not applicable.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	1.4 - 1.8 (H2O=1)
Solubility(ies)	
Solubility (water)	Soluble in water.
Partition coefficient (n-octanol/water)	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not applicable.
Viscosity	Not applicable.
Other information	
Bulk density	12 - 15 lb/gal
VOC (Weight %)	0.1 - 1.4 g/l (Calculated by EPA Method 24)

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	None known.
Incompatible materials	None known.
Hazardous decomposition products	Above 1472°F (800°C) limestone (CaCO3) can decompose to lime (CaO) and release carbon dioxide (CO2).

11. Toxicological information

Information on likely routes of exposure

Ingestion	May cause discomfort if swallowed.
Inhalation	Airborne dust may irritate throat and upper respiratory system causing coughing.
Skin contact	May cause allergic skin reactions especially in individuals with pre-existing skin disease such as eczema. (See Section 16).
Eye contact	Airborne dust may cause mechanical eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Dust may irritate eyes and mucous membranes of the nose, throat and upper respiratory system causing sneezing and/or coughing.

Information on toxicological effects

Acute toxicity	Not expected to be a hazard under normal conditions of intended use.
Skin corrosion/irritation	Prolonged or repeated skin contact may cause drying, cracking, or irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.

Skin sensitization The product contains a small amount of sensitizing substance which may provoke an allergic reaction among sensitive individuals after repeated contact.
For detailed information, see section 16.

Germ cell mutagenicity Data does not suggest that this product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not expected to increase the risk of cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Attapulgite (CAS 12174-11-7)	2B Possibly carcinogenic to humans. 3 Not classifiable as to carcinogenicity to humans.
Talc (CAS 14807-96-6)	3 Not classifiable as to carcinogenicity to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity Not expected to be a reproductive hazard.

Specific target organ toxicity - single exposure No data available, but none expected.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged exposure may cause chronic effects. For detailed information, see section 16.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability No data available.

Bioaccumulative potential Bioaccumulation is not expected.

Mobility in soil No data available.

Other adverse effects None expected.

13. Disposal considerations

Disposal instructions Dispose in accordance with applicable federal, state, and local regulations. Recycle responsibly.

Local disposal regulations Dispose of in accordance with local regulations.

Hazardous waste code Not regulated.

Waste from residues / unused products Dispose of in accordance with local regulations.

Contaminated packaging Dispose of in accordance with local regulations.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Limestone (CAS 1317-65-3)
Mica (CAS 12001-26-2)
Talc (CAS 14807-96-6)

US. New Jersey Worker and Community Right-to-Know Act

Limestone (CAS 1317-65-3)
Mica (CAS 12001-26-2)
Talc (CAS 14807-96-6)

US. Pennsylvania Worker and Community Right-to-Know Law

Limestone (CAS 1317-65-3)
Mica (CAS 12001-26-2)
Talc (CAS 14807-96-6)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Attapulgite (CAS 12174-11-7)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 07-August-2014

Revision date -

Version # 01

Further information

Vinyl acetic monomer, formaldehyde and acetaldehyde: Trace amounts of vinyl acetate monomer and formaldehyde may be found in this product.

Attapulgite: Carcinogenic to experimental animals via a route of exposure not relevant to human exposure.

Skin Sensitization Potential: This product contains an amount of Triazinetriethanol (THT) (CAS No. 4719-04-4) that is below the approved EPA regulated limits. THT can act as a sensitizer. Numerous human studies with concentrations up to 1% yielded negative (no sensitization) results. However, some results showed positive reactions in concentrations <0.5% mostly in persons with eczema.

Crystalline silica: Raw materials in this product may contain respirable crystalline silica. Exposures to respirable crystalline silica are not expected during the normal use of this product. However, actual levels must be determined by workplace hygiene testing. Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer.

Bucket NFPA Classification:
Health: 0
Flammability: 1
Physical hazard: 0

NFPA Ratings:
Health: 1
Flammability: 0
Physical hazard: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

NFPA ratings

List of abbreviations

NFPA: National Fire Protection Association.

References

Registry of Toxic Effects of Chemical Substances (RTECS)
HSDB® - Hazardous Substances Data Bank
Torben et al. (2001). Environmental and Health Assessment of Substances in Household Detergents and Cosmetic Products.

Disclaimer

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

SAFETY DATA SHEET

1. Identification

Product identifier **SHEETROCK® Brand Lightweight All Purpose Joint Compound with Dust Control**

Other means of identification

SDS number 61000010017

Synonyms Joint Compound (Ready-Mixed) , Taping Compound, Mud, Finishing Compound

Recommended use Interior use.

Recommended restrictions Use in accordance with manufacturer's recommendations.

Manufacturer / Importer / Supplier / Distributor information

Company name United States Gypsum Company

Address 550 West Adams Street
Chicago, Illinois 60661-3637

Telephone 1-800-874-4968

Website www.usg.com

Emergency phone number 1-800-507-8899

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement None.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response Get medical attention/advice if you feel unwell.

Storage Store as indicated in Section 7.

Disposal Dispose of in accordance with local, state, and federal regulations.

Hazard(s) not otherwise classified (HNOC) None known.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Limestone	1317-65-3	< 50
Perlite	93763-70-3	< 10
Attapulgite	12174-11-7	< 5

Composition comments All concentrations are in percent by weight unless ingredient is a gas.

Industrial hygiene studies by USG Corporation and governmental agencies did not detect airborne respirable crystalline silica during activities associated with the normal use of this product. However, job site air monitoring should be conducted to determine actual exposure when permissible exposure limits may be exceeded.

4. First-aid measures

Inhalation Dust irritates the respiratory system, and may cause coughing and difficulties in breathing. Move injured person into fresh air and keep person calm under observation. Get medical attention if symptoms persist.

Skin contact Contact with dust: Rinse area with plenty of water. Get medical attention if irritation develops or persists.

Eye contact Dust in the eyes: Do not rub eyes. Flush thoroughly with water. If irritation occurs, get medical assistance.

Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Dust may irritate eyes and mucous membranes of the nose, throat and upper respiratory system causing sneezing and/or coughing. May cause allergic skin disorders in sensitive individuals.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved.

5. Fire-fighting measures

Suitable extinguishing media	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	Not applicable.
Specific hazards arising from the chemical	Not a fire hazard.
Special protective equipment and precautions for firefighters	Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Use standard firefighting procedures and consider the hazards of other involved materials.
Specific methods	Cool material exposed to heat with water spray and remove it if no risk is involved.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	See Section 8 of the SDS for Personal Protective Equipment.
Methods and materials for containment and cleaning up	Large Spills: Scoop spilled materials and recover as much of the product as possible for use. If spillage is unrecoverable dispose according to local, state, and federal regulations. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
Environmental precautions	Avoid discharge to drains, sewers, and other water systems.

7. Handling and storage

Precautions for safe handling	Avoid inhalation of dust and contact with skin and eyes. Minimize dust generation and accumulation. In case of insufficient ventilation, wear suitable respiratory equipment. Observe good industrial hygiene practices. Use proper lifting techniques.
Conditions for safe storage, including any incompatibilities	Store in a cool, dry, well-ventilated place. Store in a closed container away from incompatible materials. Protect from moisture. Keep away from heat. Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Keep containers closed when not in use. Filled 4.5 gallon pails of joint compound may be stacked a maximum of 3 layers high on a standard 48 x 48 pallet (16 pails per layer, 3 layers high). Pallets may only be stacked a maximum of two high. Filled cartons of joint compound may be stacked a maximum of 3 layers high on a standard 42 x 42 or 42 x 48 pallet (16 pails per layer, 3 layers high). Pallets may only be stacked a maximum of two high.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Limestone (CAS 1317-65-3)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Limestone (CAS 1317-65-3)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Perlite (CAS 93763-70-3)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total

Biological limit values	No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls	Provide sufficient ventilation for operations causing dust formation. Observe occupational exposure limits and minimize the risk of exposure.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear approved safety goggles.
Skin protection	
Hand protection	It is a good industrial hygiene practice to minimize skin contact. For prolonged or repeated skin contact use suitable protective gloves.
Other	Normal work clothing (long sleeved shirts and long pants) is recommended.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a NIOSH/MSHA approved air purifying respirator as needed to control exposure. Consult with respirator manufacturer to determine respirator selection, use, and limitations. Use positive pressure, air-supplied respirator for uncontrolled releases or when air purifying respirator limitations may be exceeded. Follow respirator protection program requirements (OSHA 1910.134 and ANSI Z88.2) for all respirator use.
Thermal hazards	None.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment separately from regular wash. Observe any medical surveillance requirements.

9. Physical and chemical properties

Appearance	
Physical state	Semi-solid.
Form	Paste.
Color	Off-white.
Odor	Low to no odor.
Odor threshold	Not applicable.
pH	7.5 - 9.9
Melting point/freezing point	Not applicable.
Initial boiling point and boiling range	212 °F (100 °C)
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not applicable.
Flammability limit - upper (%)	Not applicable.
Explosive limit - lower (%)	Not applicable.
Explosive limit - upper (%)	Not applicable.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	1 - 1.3 (H_2O=1)
Solubility(ies)	
Solubility (water)	Soluble in water.
Partition coefficient (n-octanol/water)	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not applicable.
Viscosity	Not applicable.
Other information	
Bulk density	8.3 - 11 lb/gal
VOC (Weight %)	3.5 - 5.6 g/l (Calculated by EPA Method 24)

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.

Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	None known.
Incompatible materials	None known.
Hazardous decomposition products	Above 1472°F (800°C) limestone ($CaCO_3$) can decompose to lime (CaO) and release carbon dioxide (CO_2).

11. Toxicological information

Information on likely routes of exposure

Ingestion	May cause discomfort if swallowed.
Inhalation	Airborne dust may irritate throat and upper respiratory system causing coughing.
Skin contact	May cause allergic skin reactions especially in individuals with pre-existing skin disease such as eczema. (See Section 16).
Eye contact	Airborne dust may cause mechanical eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Dust may irritate eyes and mucous membranes of the nose, throat and upper respiratory system causing sneezing and/or coughing.

Information on toxicological effects

Acute toxicity	Not expected to be a hazard under normal conditions of intended use.
Skin corrosion/irritation	Prolonged or repeated skin contact may cause drying, cracking, or irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	The product contains a small amount of sensitizing substance which may provoke an allergic reaction among sensitive individuals after repeated contact. For detailed information, see section 16.
Germ cell mutagenicity	Data does not suggest that this product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not expected to increase the risk of cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Attapulgite (CAS 12174-11-7)	2B Possibly carcinogenic to humans. 3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity	Not expected to be a reproductive hazard.
Specific target organ toxicity - single exposure	No data available, but none expected.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged exposure may cause chronic effects. For detailed information, see section 16.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data available.
Bioaccumulative potential	Bioaccumulation is not expected.
Mobility in soil	No data available.
Other adverse effects	None expected.

13. Disposal considerations

Disposal instructions	Dispose in accordance with applicable federal, state, and local regulations. Recycle responsibly.
Local disposal regulations	Dispose of in accordance with local regulations.
Hazardous waste code	Not regulated.
Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Dispose of in accordance with local regulations.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Limestone (CAS 1317-65-3)
Perlite (CAS 93763-70-3)

US. New Jersey Worker and Community Right-to-Know Act

Limestone (CAS 1317-65-3)
Perlite (CAS 93763-70-3)

US. Pennsylvania Worker and Community Right-to-Know Law

Limestone (CAS 1317-65-3)
Perlite (CAS 93763-70-3)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Attapulgite (CAS 12174-11-7)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 04-February-2014

Revision date -

Version # 01

Further information Vinyl acetic monomer, formaldehyde and acetaldehyde: Trace amounts of vinyl acetate monomer and formaldehyde may be found in this product.

Attapulgite: Carcinogenic to experimental animals via a route of exposure not relevant to human exposure.

Skin Sensitization Potential: This product contains an amount of Triazinetriethanol (THT) (CAS No. 4719-04-4) that is below the approved EPA regulated limits. THT can act as a sensitizer. Numerous human studies with concentrations up to 1% yielded negative (no sensitization) results. However, some results showed positive reactions in concentrations <0.5% mostly in persons with eczema.

Crystalline silica: Raw materials in this product may contain respirable crystalline silica. Exposures to respirable crystalline silica are not expected during the normal use of this product. However, actual levels must be determined by workplace hygiene testing. Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer.

Bucket NFPA Classification:
Health: 0
Flammability: 1
Physical hazard: 0

NFPA Ratings:
Health: 1
Flammability: 0
Physical hazard: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

NFPA Ratings

List of abbreviations NFPA: National Fire Protection Association.

References Registry of Toxic Effects of Chemical Substances (RTECS)
HSDB® - Hazardous Substances Data Bank
Torben et al. (2001). Environmental and Health Assessment of Substances in Household Detergents and Cosmetic Products.

Disclaimer This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

SAFETY DATA SHEET

1. Identification

Product identifier **SHEETROCK® Brand PLUS 3® Lightweight All Purpose Joint Compound, Ready-Mixed**

Other means of identification

SDS number 61000010011

Synonyms Joint Compound (Ready-Mixed) , Taping Compound, Mud, Finishing Compound

Recommended use Interior use.

Recommended restrictions Use in accordance with manufacturer's recommendations.

Manufacturer / Importer / Supplier / Distributor information

Company name United States Gypsum Company

Address 550 West Adams Street
Chicago, Illinois 60661-3637

Telephone 1-800-874-4968

Website www.usg.com

Emergency phone number 1-800-507-8899

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement None.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response Get medical attention/advice if you feel unwell.

Storage Store as indicated in Section 7.

Disposal Dispose of in accordance with local, state, and federal regulations.

Hazard(s) not otherwise classified (HNOC) Not classified.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Limestone	1317-65-3	< 50
Perlite	93763-70-3	< 10
Attapulgite	12174-11-7	< 5

Composition comments All concentrations are in percent by weight unless ingredient is a gas.

Industrial hygiene studies by USG Corporation and governmental agencies did not detect airborne respirable crystalline silica during activities associated with the normal use of this product. However, job site air monitoring should be conducted to determine actual exposure when permissible exposure limits may be exceeded.

4. First-aid measures

Inhalation Dust irritates the respiratory system, and may cause coughing and difficulties in breathing. Move injured person into fresh air and keep person calm under observation. Get medical attention if symptoms persist.

Skin contact Contact with dust: Rinse area with plenty of water. Get medical attention if irritation develops or persists.

Eye contact Dust in the eyes: Do not rub eyes. Flush thoroughly with water. If irritation occurs, get medical assistance.

Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Dust may irritate eyes and mucous membranes of the nose, throat and upper respiratory system causing sneezing and/or coughing. May cause allergic skin disorders in sensitive individuals.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved.

5. Fire-fighting measures

Suitable extinguishing media	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	Not applicable.
Specific hazards arising from the chemical	Not a fire hazard.
Special protective equipment and precautions for firefighters	Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Use standard firefighting procedures and consider the hazards of other involved materials.
Specific methods	Cool material exposed to heat with water spray and remove it if no risk is involved.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	See Section 8 of the SDS for Personal Protective Equipment.
Methods and materials for containment and cleaning up	Large Spills: Scoop spilled materials and recover as much of the product as possible for use. If spillage is unrecoverable dispose according to local, state, and federal regulations. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
Environmental precautions	Avoid discharge to drains, sewers, and other water systems.

7. Handling and storage

Precautions for safe handling	Avoid inhalation of dust and contact with skin and eyes. Minimize dust generation and accumulation. In case of insufficient ventilation, wear suitable respiratory equipment. Observe good industrial hygiene practices. Use proper lifting techniques.
Conditions for safe storage, including any incompatibilities	Store in a cool, dry, well-ventilated place. Store in a closed container away from incompatible materials. Protect from moisture. Keep away from heat. Do not use if material has spoiled, i.e., there is a moldy appearance or an unpleasant odor. Keep containers closed when not in use. Filled 4.5 gallon pails of joint compound may be stacked a maximum of 3 layers high on a standard 48 x 48 pallet (16 pails per layer, 3 layers high). Pallets may only be stacked a maximum of two high. Filled cartons of joint compound may be stacked a maximum of 3 layers high on a standard 42 x 42 or 42 x 48 pallet (16 pails per layer, 3 layers high). Pallets may only be stacked a maximum of two high.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Limestone (CAS 1317-65-3)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

US NIOSH Pocket Guide to Chemical Hazards: Recommended exposure limit (REL)

Components	Type	Value	Form
Limestone (CAS 1317-65-3)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Perlite (CAS 93763-70-3)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total

Biological limit values	No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls	Provide sufficient ventilation for operations causing dust formation. Observe occupational exposure limits and minimize the risk of exposure.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear approved safety goggles.
Skin protection	
Hand protection	It is a good industrial hygiene practice to minimize skin contact. For prolonged or repeated skin contact use suitable protective gloves.
Other	Normal work clothing (long sleeved shirts and long pants) is recommended.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a NIOSH/MSHA approved air purifying respirator as needed to control exposure. Consult with respirator manufacturer to determine respirator selection, use, and limitations. Use positive pressure, air-supplied respirator for uncontrolled releases or when air purifying respirator limitations may be exceeded. Follow respirator protection program requirements (OSHA 1910.134 and ANSI Z88.2) for all respirator use.
Thermal hazards	None.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment separately from regular wash. Observe any medical surveillance requirements.

9. Physical and chemical properties

Appearance	
Physical state	Semi-solid.
Form	Paste.
Color	Off-white.
Odor	Low to no odor.
Odor threshold	Not applicable.
pH	7.5 - 9.9
Melting point/freezing point	Not applicable.
Initial boiling point and boiling range	212 °F (100 °C)
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not applicable.
Flammability limit - upper (%)	Not applicable.
Explosive limit - lower (%)	Not applicable.
Explosive limit - upper (%)	Not applicable.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	1 - 1.3 (H_2O=1)
Solubility(ies)	Soluble in water.
Partition coefficient (n-octanol/water)	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not applicable.
Viscosity	Not applicable.
Other information	
Bulk density	8.3 - 11 lb/gal
VOC (Weight %)	0.1 - 1.6 g/l (Calculated by EPA Method 24)

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	None known.
Incompatible materials	None known.
Hazardous decomposition products	Above 1472°F (800°C) limestone ($CaCO_3$) can decompose to lime (CaO) and release carbon dioxide (CO_2).

11. Toxicological information

Information on likely routes of exposure

Ingestion	May cause discomfort if swallowed.
Inhalation	Airborne dust may irritate throat and upper respiratory system causing coughing.
Skin contact	May cause allergic skin reactions especially in individuals with pre-existing skin disease such as eczema. (See Section 16).
Eye contact	Airborne dust may cause mechanical eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Dust may irritate eyes and mucous membranes of the nose, throat and upper respiratory system causing sneezing and/or coughing.

Information on toxicological effects

Acute toxicity	Not expected to be a hazard under normal conditions of intended use.
Skin corrosion/irritation	Prolonged or repeated skin contact may cause drying, cracking, or irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	The product contains a small amount of sensitizing substance which may provoke an allergic reaction among sensitive individuals after repeated contact. For detailed information, see section 16.
Germ cell mutagenicity	Data does not suggest that this product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not expected to increase the risk of cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Attapulgite (CAS 12174-11-7)	2B Possibly carcinogenic to humans. 3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity	Not expected to be a reproductive hazard.
Specific target organ toxicity - single exposure	No data available, but none expected.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged exposure may cause chronic effects. For detailed information, see section 16.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data available.
Bioaccumulative potential	Bioaccumulation is not expected.
Mobility in soil	No data available.
Other adverse effects	None expected.

13. Disposal considerations

Disposal instructions	Dispose in accordance with applicable federal, state, and local regulations. Recycle responsibly.
Local disposal regulations	Dispose of in accordance with local regulations.
Hazardous waste code	Not regulated.
Waste from residues / unused products	Dispose of in accordance with local regulations.
Contaminated packaging	Dispose of in accordance with local regulations.

14. Transport information

DOT

Not regulated as a hazardous material by DOT.

IATA

Not regulated as a dangerous good.

IMDG

Not regulated as a dangerous good.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Limestone (CAS 1317-65-3)
Perlite (CAS 93763-70-3)

US. New Jersey Worker and Community Right-to-Know Act

Limestone (CAS 1317-65-3)
Perlite (CAS 93763-70-3)

US. Pennsylvania Worker and Community Right-to-Know Law

Limestone (CAS 1317-65-3)
Perlite (CAS 93763-70-3)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Attapulgite (CAS 12174-11-7)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 22-January-2014

Revision date -

Version # 01

Further information Vinyl acetate monomer, formaldehyde and acetaldehyde: Trace amounts of vinyl acetate monomer and formaldehyde may be found in this product.

Attapulgite: Carcinogenic to experimental animals via a route of exposure not relevant to human exposure.

Skin Sensitization Potential: This product contains an amount of Triazinetriethanol (THT) (CAS No. 4719-04-4) that is below the approved EPA regulated limits. THT can act as a sensitizer. Numerous human studies with concentrations up to 1% yielded negative (no sensitization) results. However, some results showed positive reactions in concentrations <0.5% mostly in persons with eczema.

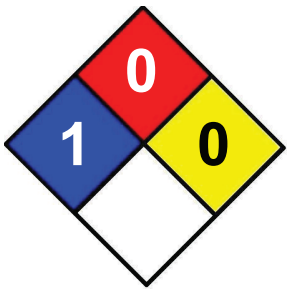
Crystalline silica: Raw materials in this product may contain respirable crystalline silica. Exposures to respirable crystalline silica are not expected during the normal use of this product. However, actual levels must be determined by workplace hygiene testing. Prolonged and repeated exposure to airborne free respirable crystalline silica can result in lung disease (i.e., silicosis) and/or lung cancer.

Bucket NFPA Classification:
Health: 0
Flammability: 1
Physical hazard: 0

NFPA Ratings:
Health: 1
Flammability: 0
Physical hazard: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

NFPA Ratings



List of abbreviations NFPA: National Fire Protection Association.

References Registry of Toxic Effects of Chemical Substances (RTECS)
HSDB® - Hazardous Substances Data Bank
Torben et al. (2001). Environmental and Health Assessment of Substances in Household Detergents and Cosmetic Products.

Disclaimer This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

Print Close
Shell Lubricants in the USA

MATERIAL SAFETY DATA SHEET

MSDS Number: 71630E - 13

24 Hour Emergency Assistance: CHEMTEL (877) 276-7283
General Assistance Number: (877) 276-7285

SECTION 1 PRODUCT IDENTIFICATION

MATERIAL IDENTITY: Rotella® T Multigrade SAE 15W-40

PRODUCT CODES: 50012
COMPANY ADDRESS: Equilon Enterprises LLC, P. O. Box 4453, Houston, TX. 77210-4453

SECTION 2 PRODUCT/INGREDIENTS

CAS#	CONCENTRATION	INGREDIENTS
	100 %volume	Multigrade Motor Oil
Mixture	80 - 94.99 %volume	Highly refined petroleum distillates
Mixture	3 - 8.99 %volume	Zinc Compounds
Mixture	1 - 4.99 %volume	Polymer additives

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
Appearance & Odor: Bright and clear liquid. Mild odor
Health Hazards: No known immediate health hazards.
Physical Hazards: No known physical hazards.
NFPA Rating (Health, Fire, Reactivity): 0, 1, 0
Hazard Rating:Least - 0 Slight - 1 Moderate - 2 High - 3 Extreme - 4

Inhalation:
Inhalation of vapors (generated at high temperatures only) or oil mist may cause mild irritation of the nose, throat, and respiratory tract.

Eye Irritation:
Lubricating oils are generally considered no more than minimally irritating to the eyes.

Skin Contact:
Lubricating oils are generally considered no more than minimally irritating to the skin. Prolonged and repeated contact may result in defatting and drying

of the skin that may cause various skin disorders such as dermatitis, folliculitis or oil acne.

Ingestion:
Lubricating oils are generally no more than slightly toxic if swallowed.

Other Health Effects:
The International Agency for Research on Cancer (IARC) has determined there is sufficient evidence for the carcinogenicity in experimental animals of used gasoline motor oils. Handling procedures and safety precautions in the MSDS should be followed to minimize exposure to the used product.
Material may release hydrogen sulfide (H_2S), a highly toxic and extremely flammable gas, when heated to 180 Degrees F or higher. H_2S can cause irritation of the eyes and respiratory tract, headache, dizziness, nausea, vomitting, diarrhea, and pulmonary edema. The odor ("rotten egg") threshold is 0.02 ppm. Do not depend on sense of smell for warning; H_2S rapidly deadens the sense of smell.

Signs and Symptoms:
Irritation as noted above.

Aggravated Medical Conditions:
Pre-existing eye, skin and respiratory disorders may be aggravated by exposure to this product.

For additional health information, refer to section 11.

SECTION 4 FIRST AID MEASURES

Inhalation:
Remove victim to fresh air and provide oxygen if breathing is difficult. Get medical attention.

Skin:
Remove contaminated clothing and shoes and wipe excess from skin. Flush skin with water, then wash with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned.
Eye:
Flush with water. If irritation occurs, get medical attention.

Ingestion:
Do not induce vomiting. In general, no treatment is necessary unless large quantities of product are ingested. However, get medical attention.

Note to Physician:
In general, emesis induction is unnecessary in high viscosity, low volatility products such as oils and greases.

SECTION 5 FIRE FIGHTING MEASURES

Flash Point [Method]: 435 ºF/223.89 ºC [Pensky-Martens Closed Cup]

Extinguishing Media:
Material will float and can be re-ignited on surface of water. Use water fog, 'alcohol foam', dry chemical or carbon dioxide (CO_2) to extinguish flames. Do not use a direct stream of water.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures:
May burn although not readily ignitable.

Wear appropriate personal protective equipment when cleaning up spills. Refer to Section 8.

Spill Management:
FOR LARGE SPILLS: Remove with vacuum truck or pump to storage/salvage vessels.

FOR SMALL SPILLS: Soak up residue with an absorbent such as clay, sand or other suitable material. Place in non-leaking container and seal tightly for proper disposal.

Place in container for proper disposal.

Reporting:
CERCLA: Product is covered by EPA's Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) petroleum exclusion. Releases to air, land, or water are not reportable under CERCLA (Superfund).

CWA: This product is an oil as defined under Section 311 of EPA's Clean Water Act (CWA). Spills into or leading to surface waters that cause a sheen must be reported to the National Response Center, 1-800-424-8802.

SECTION 7 HANDLING AND STORAGE

Precautionary Measures:
Wash with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet. Launder contaminated clothing before reuse. Properly dispose of contaminated leather articles such as shoes or belts that cannot be decontaminated. Avoid heat, open flames, including pilot lights, and strong oxidizing agents. Use explosion-proof ventilation to prevent vapor accumulation. Ground all handling equipment to prevent sparking.

Material may release hydrogen sulfide (H_2S), a highly toxic and extremely flammable gas, when heated to 180 Degrees F or higher. H_2S may collect in the headspace of the container.

Storage:
Store in a cool, dry place with adequate ventilation. Keep away from open flames and high temperatures.

Container Warnings:
Keep containers closed when not in use. Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Oil mist, mineral	ACGIH TLV	TWA: 5 mg/m3	STEL: 10 mg/m3
Oil mist, mineral	OSHA PEL	TWA: 5 mg/m3	
Hydrogen sulfide	ACGIH - TLV	TWA: 10 ppmm	STEL: 15 ppmm
Hydrogen sulfide	OSHA - PEL_IS	TWA: 10 ppmm	STEL: 15 ppmm
Hydrogen sulfide	Elevated Temperatures	> 180 Degres F.	

EXPOSURE CONTROLS
Adequate ventilation to control airborne concentrations below the exposure guidelines/limits.

PERSONAL PROTECTION
Personal protective equipment (PPE) selections vary based on potential exposure conditions such as handling practices, concentration and ventilation. Information on the selection of eye, skin and respiratory protection for use with this material is provided below.

Eye Protection:
Chemical Goggles, or Safety glasses with side shields

Skin Protection:
Use protective clothing which is chemically resistant to this material. Selection of protective clothing depends on potential exposure conditions and may include gloves, boots, suits and other items. The selection(s) should take into account such factors as job task, type of exposure and durability requirements.

Published literature, test data and/or glove and clothing manufacturers indicate the best protection is provided by:
Neoprene, or Nitrile Rubber

Respiratory Protection:
If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, an approved respirator must be worn. Respirator selection, use and maintenance should be in accordance with the requirements of the OSHA Respiratory Protection Standard, 29 CFR 1910.134.

Types of respirator(s) to be considered in the selection process include:
For Mist: Air Purifying, R or P style NIOSH approved respirator.
For Vapors: Air Purifying, R or P style prefilter & organic cartridge, NIOSH approved respirator. Self-contained breathing apparatus.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Odor: Bright and clear liquid. Mild odor
Substance Chemical Family: Petroleum Hydrocarbon
Appearance: Bright and clear liquid.

Flash Point: 435 ºF [Pensky-Martens Closed Cup]

Pour Point: -20 ºF

Specific Gravity: 0.8856

Stability: Stable

Viscosity: 103 cSt @ 40 ºC

SECTION 10 REACTIVITY AND STABILITY

Stability:
Material is stable under normal conditions.

Conditions to Avoid:
Avoid heat and open flames.

Materials to Avoid:
Avoid contact with strong oxidizing agents.

Hazardous Decomposition Products:
Thermal decomposition products are highly dependent on combustion conditions. A complex mixture of airborne solids, liquids and gases will evolve when this material undergoes pyrolysis or combustion. Aldehydes, Carbon Monoxide, Carbon Dioxide, Hydrogen Sulfide, Ketones, Nitrogen Oxides and other unidentified organic compounds may be formed upon combustion.

SECTION 11 TOXICOLOGICAL INFORMATION

Carcinogenicity Classification
Multigrade Motor Oil
NTP: No IARC: Not Reviewed by IARC ACGIH: Not Reviewed OSHA: No

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SECTION 12 ECOLOGICAL INFORMATION

Environmental Impact Summary:
There is no ecological data available for this product. However, this product is an oil. It is persistent and does not readily biodegrade. However, it does not bioaccumulate.

SECTION 13 DISPOSAL CONSIDERATIONS

RCRA Information:
Under RCRA, it is the responsibility of the user of the material to determine, at the time of the disposal, whether the material meets RCRA criteria for hazardous waste. This is because material uses, transformations, mixtures, processes, etc. may affect the classification. Refer to the latest EPA, state and local regulations regarding proper disposal.

SECTION 14 TRANSPORT INFORMATION

US Department of Transportation Classification
This material is not subject to DOT regulations under 49 CFR Parts 171-180.

Oil: This product is an oil under 49CFR (DOT) Part 130. If shipped by rail or highway in a tank with a capacity of 3500 gallons or more, it is subject to these requirements. Mixtures or solutions containing 10% or more of this product may also be subject to this rule.

International Air Transport Association
Not regulated under IATA rules.

International Maritime Organization Classification
Not regulated under International Maritime Organization rules.

SECTION 15 REGULATORY INFORMATION

FEDERAL REGULATORY STATUS

OSHA Classification:
Product is hazardous according to the OSHA Hazard Communication Standard, 29 CFR 19.10.1200, because it carries the occupational exposure limit for mineral oil mist.

Ozone Depleting Substances (40 CFR 82 Clean Air Act):
This material does not contain nor was it directly manufactured with any Class I or Class II ozone depleting substances.

Superfund Amendment & Reauthorization Act (SARA) Title III:

There are no components in this product on the SARA 302 list.

SARA Hazard Categories (311/312):
Immediate Health:NO Delayed Health:NO Fire:NO Pressure:NO
Reactivity:NO

SARA Toxic Release Inventory (TRI) (313):

Zinc compounds

Toxic Substances Control Act (TSCA) Status:
All component(s) of this material is(are) listed on the EPA/TSCA Inventory of Chemical Substances.

Other Chemical Inventories:
Component(s) of this material is (are) listed on the Australian AICS, Canadian DSL, Chinese Inventory, European EINECS, Korean Inventory, Philippines PICCS

State Regulation
The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

New Jersey Right-To-Know Chemical List:
Zinc compounds 3 - 8.99 %volume

Pennsylvania Right-To-Know Chemical List:
Zinc compounds 3 - 8.99 %volume Environmental Hazard

SECTION 16 OTHER INFORMATION

Revision#: 13
Revision Date: 05/16/2002
Revisions since last change (discussion): This Material Safety Data Sheet (MSDS) has been newly reviewed to fully comply with the guidance contained in the ANSI MSDS standard (ANSI Z400.1-1998). We encourage you to take the opportunity to read the MSDS and review the information contained therein.

SECTION 17 LABEL INFORMATION

READ AND UNDERSTAND MATERIAL SAFETY DATA SHEET BEFORE HANDLING OR DISPOSING OF PRODUCT. THIS LABEL COMPLIES WITH THE REQUIREMENTS OF THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200) FOR USE IN THE WORKPLACE. THIS LABEL IS NOT INTENDED TO BE USED WITH PACKAGING INTENDED FOR SALE TO CONSUMERS AND MAY NOT CONFORM WITH THE REQUIREMENTS OF THE CONSUMER PRODUCT SAFETY ACT OR OTHER RELATED REGULATORY REQUIREMENTS.

PRODUCT CODES: 50012

Rotella® T Multigrade SAE 15W-40

ATTENTION!

PROLONGED OR REPEATED SKIN CONTACT MAY CAUSE OIL ACNE OR DERMATITIS. USED GASOLINE ENGINE OIL HAS BEEN SHOWN TO CAUSE CANCER IN LABORATORY ANIMALS.

Precautionary Measures:
Avoid prolonged or repeated contact with eyes, skin and clothing. Wash thoroughly after handling.

FIRST AID

Inhalation: Remove victim to fresh air and provide oxygen if breathing is difficult. Get medical attention.
Skin Contact: Remove contaminated clothing and shoes and wipe excess from skin. Flush skin with water, then wash with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned.
Eye Contact: Flush with water. If irritation occurs, get medical attention.
Ingestion: Do not induce vomiting. In general, no treatment is necessary unless large quantities of product are ingested. However, get medical attention.

FIRE

In case of fire, Use water fog, 'alcohol foam', dry chemical or carbon dioxide (CO_2) to extinguish flames. Do not use a direct stream of water. Material will float and can be re-ignited on surface of water.

SPILL OR LEAK
Dike and contain spill.
FOR LARGE SPILLS: Remove with vacuum truck or pump to storage/salvage vessels.

FOR SMALL SPILLS: Soak up residue with an absorbent such as clay, sand or other suitable material. Place in non-leaking container and seal tightly for proper disposal.

CONTAINS: Highly refined petroleum distillates, Mixture; Zinc Compounds, Mixture; Polymer additives, Mixture

NFPA Rating (Health, Fire, Reactivity): 0, 1, 0

TRANSPORTATION
US Department of Transportation Classification
This material is not subject to DOT regulations under 49 CFR Parts 171-180.

Oil: This product is an oil under 49CFR (DOT) Part 130. If shipped by rail or highway in a tank with a capacity of 3500 gallons or more, it is subject to these requirements. Mixtures or solutions containing 10% or more of this product may also be subject to this rule.

CAUTION: Misuse of empty containers can be hazardous. Empty containers can be hazardous if used to store toxic, flammable, or reactive materials. Cutting or welding of empty containers might cause fire, explosion or toxic fumes from residues. Do not pressurize or expose to open flames or heat. Keep container closed and drum bungs in place.

Name and Address
Equilon Enterprises LLC
P. O. Box 4453
Houston, TX 77210-4453

TRANSPORTATION EMERGENCY CHEMTEL (877) 276-7283

HEALTH EMERGENCY CHEMTEL (877) 276-7283

ADMINISTRATIVE INFORMATION

COMPANY ADDRESS: Equilon Enterprises LLC, P. O. Box 4453, Houston, TX. 77210-4453
Company Product Stewardship & Regulatory Compliance Contact: Timothy W Childs
Phone Number: (281) 874-7708
MSDS FAX-BACK Phone Number: (877) 276-7285

THE INFORMATION CONTAINED IN THIS DATA SHEET IS BASED ON THE DATA AVAILABLE TO US AT THIS TIME, AND IS BELIEVED TO BE ACCURATE BASED UPON THAT : IT IS PROVIDED INDEPENDENTLY OF ANY SALE OF THE PRODUCT, FOR PURPOSE OF HAZARD COMMUNICATION. IT IS NOT INTENDED TO CONSTITUTE PRODUCT PERFORMANCE INFORMATION, AND NO EXPRESS OR IMPLIED WARRANTY OF ANY KIND IS MADE WITH RESPECT TO THE PRODUCT, UNDERLYING DATA OR THE INFORMATION CONTAINED HEREIN. YOU ARE URGED TO OBTAIN DATA SHEETS FOR ALL PRODUCTS YOU BUY, PROCESS, USE OR DISTRIBUTE, AND ARE ENCOURAGED TO ADVISE THOSE WHO MAY COME IN CONTACT WITH SUCH PRODUCTS OF THE INFORMATION CONTAINED HEREIN.

TO DETERMINE THE APPLICABILITY OR EFFECT OF ANY LAW OR REGULATION WITH RESPECT TO THE PRODUCT, YOU SHOULD CONSULT WITH YOUR LEGAL ADVISOR OR THE APPROPRIATE GOVERNMENT AGENCY. WE WILL NOT PROVIDE ADVICE ON SUCH MATTERS, OR BE RESPONSIBLE FOR ANY INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN. THE UNDERLYING DATA, AND THE INFORMATION PROVIDED HEREIN AS A RESULT OF THAT DATA, IS THE PROPERTY OF EQUIVA SERVICES LLC AND IS NOT TO BE THE SUBJECT OF SALE OR EXCHANGE WITHOUT THE EXPRESS WRITTEN CONSENT OF EQUIVA SERVICES LLC.

36318-10737-100R-05/20/2002

MATERIAL SAFETY DATA SHEET

162-6316
03 00

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
162-6316

HMIS CODES

Health	1
Flammability	0
Reactivity	0

PRODUCT NAME
SHER-MAX* Urethanized Elastomeric Sealant, White

MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

EMERGENCY TELEPHONE NO.
(216) 566-2917

DATE OF PREPARATION
24-OCT-06

INFORMATION TELEPHONE NO.
(216) 566-2902

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT		UNITS	VAPOR PRESSURE
3	8042-47-5	Paraffinic Mineral Oil			
			ACGIH TLV 5	mg/m3 as Mist	
			OSHA PEL 5	mg/m3 as Mist	
40	471-34-1	Calcium Carbonate			
			ACGIH TLV 10	mg/m3 as Dust	
			OSHA PEL 15	mg/m3 Total Dust	
			OSHA PEL 5	mg/m3 Respirable Fraction	

Section 3 -- HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.

CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

Continued on page 2

Section 4 -- FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL
Not Applicable	N.A.	N.A.

FLAMMABILITY CLASSIFICATION
Not Applicable

EXTINGUISHING MEDIA
Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS
Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES
Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

Section 7 -- HANDLING AND STORAGE

STORAGE CATEGORY
Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE
Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

Continued on page 3

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Required for long or repeated contact.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	11.68 lb/gal	1399 g/l
SPECIFIC GRAVITY	1.41	
BOILING POINT	212 - 213 F	100 - 100 C
MELTING POINT	Not Available	
VOLATILE VOLUME	26 %	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	8.0	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.14 lb/gal	17 g/l	Less Water and Federally Exempt Solvents
0.10 lb/gal	12 g/l	Emitted VOC

Continued on page 4

Section 10 -- STABILITY AND REACTIVITY

STABILITY -- Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

Section 11 -- TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.

TOXICOLOGY DATA

CAS No.	Ingredient Name				
8042-47-5	Paraffinic Mineral Oil				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
471-34-1	Calcium Carbonate				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

Section 12 -- ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

Section 13 -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

Section 14 -- TRANSPORT INFORMATION

No data available.

Section 15 -- REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

Continued on page 5

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element

No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

Section 16 -- OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

TM2133
22 00

DATE OF PREPARATION
Nov 17, 2010

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
TM2133
PRODUCT NAME
SETFAST® Water Borne Traffic Marking Paint (Acrylic Latex), Blue
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units		Vapor Pressure
2	**67-56-1**	**Methanol**			
		ACGIH TLV	200	ppm (Skin)	92 mm
		ACGIH TLV	250	ppm (Skin) STEL	
		OSHA PEL	200	ppm (Skin)	
		OSHA PEL	250	ppm (Skin) STEL	
2	**112-34-5**	**2-(2-Butoxyethoxy)-ethanol**			
		ACGIH TLV		Not Available	0.06 mm
		OSHA PEL		Not Available	
50	**471-34-1**	**Calcium Carbonate**			
		ACGIH TLV	10	mg/m3 as Dust	
		OSHA PEL	15	mg/m3 Total Dust	
		OSHA PEL	5	mg/m3 Respirable Fraction	
0.9	**13463-67-7**	**Titanium Dioxide**			
		ACGIH TLV	10	mg/m3 as Dust	
		OSHA PEL	10	mg/m3 Total Dust	
		OSHA PEL	5	mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	3*
Flammability	2
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.
Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:
- the liver
- the urinary system

SIGNS AND SYMPTOMS OF OVEREXPOSURE
Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
May cause allergic skin reaction in susceptible persons or skin sensitization.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
150 °F PMCC	0.9	36.5	Combustible, Flash above 99 and below 200 °F

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.
Application to hot surfaces requires special precautions.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

DOL Storage Class IIIA

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are COMBUSTIBLE. Keep away from heat and open flame.
Consult NFPA Code. Use approved Bonding and Grounding procedures.
Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.
This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.
When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	12.51 lb/gal	1499 g/l
SPECIFIC GRAVITY	1.51	
BOILING POINT	148 - 448 °F	64 - 231 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	44%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	8.2	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.71 lb/gal	86 g/l	Less Water and Federally Exempt Solvents
0.44 lb/gal	53 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

TOXICOLOGY DATA

CAS No.	Ingredient Name				
67-56-1	**Methanol**				
		LC50	RAT	4HR	64000 ppm
		LD50	RAT		5630 mg/kg
112-34-5	**2-(2-Butoxyethoxy)-ethanol**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		5660 mg/kg
471-34-1	**Calcium Carbonate**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
13463-67-7	**Titanium Dioxide**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

US Ground (DOT)

Not Regulated for Transportation.

Canada (TDG)
Not Regulated for Transportation.
IMO
Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
67-56-1	Methanol	2	
	Glycol Ethers	2	

CALIFORNIA PROPOSITION 65
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
TSCA CERTIFICATION
All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

SAFETY DATA SHEET

TM2152

Section 1. Identification

Product name : HOTLINE® Fast Dry Waterborne Traffic Marking Paint (TT-P-1952D/E Type I & II) White

Product code : TM2152

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : SHERWIN-WILLIAMS - TRAFFIC PAINT
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OHIO 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : (800) 368-2026

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 4
CARCINOGENICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Combustible liquid.
Suspected of causing cancer.
Causes damage to organs.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from flames and hot surfaces. - No smoking. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

Section 2. Hazards identification

Response : Get medical attention if you feel unwell. IF exposed: Call a POISON CENTER or physician.

Storage : Store locked up. Store in a well-ventilated place. Keep cool.

Disposal Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY. Adequate ventilation required when sanding or abrading the dried film. If Adequate ventilation cannot be provided wear an approved particulate respirator (NIOSH approved). Follow respirator manufacturer's directions for respirator use. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Abrading or sanding of the dry film may release Crystalline Silica which has been shown to cause lung damage and cancer under long term exposure.

Please refer to the SDS for additional information. Do not transfer contents to other containers for storage.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Titanium Dioxide	≥5 - <10	13463-67-7
Methanol	≥1 - <3	67-56-1

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Section 4. First aid measures

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Section 5. Fire-fighting measures

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Titanium Dioxide	**ACGIH TLV (United States, 3/2015).** TWA: 10 mg/m³ 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 15 mg/m³ 8 hours. Form: Total dust
Methanol	**ACGIH TLV (United States, 3/2015).** **Absorbed through skin.** TWA: 200 ppm 8 hours. TWA: 262 mg/m³ 8 hours. STEL: 250 ppm 15 minutes. STEL: 328 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2013).** **Absorbed through skin.** TWA: 200 ppm 10 hours. TWA: 260 mg/m³ 10 hours. STEL: 250 ppm 15 minutes. STEL: 325 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 200 ppm 8 hours. TWA: 260 mg/m³ 8 hours.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Section 8. Exposure controls/personal protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : 9.5

Melting point : Not available.

Boiling point : 64°C (147.2°F)

Flash point : Closed cup: 66°C (150.8°F) [Pensky-Martens Closed Cup]

Evaporation rate : 2.07 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Lower: 6%
Upper: 36.5%

Vapor pressure : 1.6 kPa (12.265 mm Hg) [at 20°C]

Vapor density : 1 [Air = 1]

Relative density : 1.69

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (room temperature): >0.205 cm^2/s (>20.5 cSt)
Kinematic (40°C (104°F)): >0.205 cm^2/s (>20.5 cSt)

Molecular weight : Not applicable.

Aerosol product

Heat of combustion : 1.089 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Methanol	LC50 Inhalation Gas. LC50 Inhalation Gas. LD50 Dermal LD50 Oral	Rat Rat Rabbit Rat	145000 ppm 64000 ppm 15800 mg/kg 5600 mg/kg	1 hours 4 hours - -

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Titanium Dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-
Methanol	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	40 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Titanium Dioxide	-	2B	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Section 11. Toxicological information

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Methanol	Category 1 Category 3	All Not applicable.	Not determined Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Methanol	Category 2	Not determined	Not determined

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	4700 mg/kg
Dermal	14099.9 mg/kg
Inhalation (vapors)	141 mg/l

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Titanium Dioxide	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours
Methanol	Acute EC50 16.912 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 2500000 µg/l Marine water	Crustaceans - Crangon crangon - Adult	48 hours
	Acute LC50 3289 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 290 mg/l Fresh water	Fish - Danio rerio - Egg	96 hours
	Chronic NOEC 9.96 mg/l Marine water	Algae - Ulva pertusa	96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Titanium Dioxide	-	352	low
Methanol	-	<10	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Emergency schedules (EmS)** Not Applicable

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Proper shipping name : Not available.

Ship type : Not available.

Pollution category : Not available.

Section 15. Regulatory information

SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	3
Flammability		2
Physical hazards		0

The customer is responsible for determining the PPE code for this material.

Section 16. Other information

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

Procedure used to derive the classification

Classification	Justification
Flam. Liq. 4, H227	On basis of test data
Carc. 2, H351	Calculation method
STOT SE 1, H370	Calculation method
STOT RE 2, H373	Calculation method

History

Date of printing : 2/13/2016

Date of issue/Date of revision : 2/13/2016

Date of previous issue : 8/15/2015

Version : 1.03

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

SAFETY DATA SHEET

TM5626

Section 1. Identification

Product name : SETFAST® Low VOC Acrylic Traffic Marking Paint
White

Product code : TM5626

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY
101 PROSPECT AVENUE, NW
CLEVELAND, OHIO 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : (800) 524-5979

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
CARCINOGENICITY - Category 1A
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 14.7%

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Highly flammable liquid and vapor.
Causes serious eye irritation.
May cause cancer.
May cause respiratory irritation.
May cause drowsiness and dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Section 2. Hazards identification

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Wash hands thoroughly after handling.

Response : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage : Store locked up. Store in a well-ventilated place. Keep cool.

Disposal Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY. Adequate ventilation required when sanding or abrading the dried film. If Adequate ventilation cannot be provided wear an approved particulate respirator (NIOSH approved). Follow respirator manufacturer's directions for respirator use. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Abrading or sanding of the dry film may release Crystalline Silica which has been shown to cause lung damage and cancer under long term exposure.

Please refer to the SDS for additional information. Do not transfer contents to other containers for storage.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Acetone	≥25 - <50	67-64-1
Titanium Dioxide	≥5 - <10	13463-67-7
Chlorinated Paraffin	≥2 - <3	63449-39-8
Xylene	≥2 - <3	1330-20-7
Ethylbenzene	≥0.3 - <1	100-41-4
Quartz	≥0.1 - <0.3	14808-60-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.

Skin contact : No known significant effects or critical hazards.

Ingestion : Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Section 4. First aid measures

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Acetone	**ACGIH TLV (United States, 3/2015).** TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes. **NIOSH REL (United States, 10/2013).** TWA: 250 ppm 10 hours. TWA: 590 mg/m³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 1000 ppm 8 hours. TWA: 2400 mg/m³ 8 hours.
Titanium Dioxide	**ACGIH TLV (United States, 3/2015).** TWA: 10 mg/m³ 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 15 mg/m³ 8 hours. Form: Total dust
Chlorinated Paraffin	None.
Xylene	**ACGIH TLV (United States, 3/2015).**

	TWA: 100 ppm 8 hours. TWA: 434 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 651 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.
Ethylbenzene	**ACGIH TLV (United States, 3/2015).** TWA: 20 ppm 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 100 ppm 10 hours. TWA: 435 mg/m³ 10 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.
Quartz	**OSHA PEL Z3 (United States, 2/2013).** TWA: 250 MPPCF / (%SiO2+5) 8 hours. Form: Respirable TWA: 10 MG/M3 / (%SiO2+2) 8 hours. Form: Respirable **ACGIH TLV (United States, 3/2015).** TWA: 0.025 mg/m³ 8 hours. Form: Respirable fraction **NIOSH REL (United States, 10/2013).** TWA: 0.05 mg/m³ 10 hours. Form: respirable dust

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Section 8. Exposure controls/personal protection

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : 55°C (131°F)

Flash point : Closed cup: -17°C (1.4°F) [Pensky-Martens Closed Cup]

Evaporation rate : 5.6 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Lower: 1%
Upper: 12.8%

Vapor pressure : 3.2 kPa (23.998 mm Hg) [at 20°C]

Vapor density : 2 [Air = 1]

Relative density : 1.4

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (room temperature): >0.205 cm^2/s (>20.5 cSt)
Kinematic (40°C (104°F)): >0.205 cm^2/s (>20.5 cSt)

Molecular weight : Not applicable.

Aerosol product

Heat of combustion : 9.719 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Section 10. Stability and reactivity

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Acetone	LD50 Oral	Rat	5800 mg/kg	-
Xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
Ethylbenzene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Acetone	Eyes - Mild irritant	Human	-	186300 parts per million	-
	Eyes - Mild irritant	Rabbit	-	10 microliters	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	395 milligrams	-
Titanium Dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-
Xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	100 Percent	-
Ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Section 11. Toxicological information

Classification

Product/ingredient name	OSHA	IARC	NTP
Titanium Dioxide	-	2B	-
Xylene	-	3	-
Ethylbenzene	-	2B	-
Quartz	-	1	Known to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Chlorinated Paraffin	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Xylene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Ethylbenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 2	Not determined	Not determined
Chlorinated Paraffin	Category 2	Not determined	Not determined
Xylene	Category 2	Not determined	Not determined
Ethylbenzene	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
Xylene	ASPIRATION HAZARD - Category 1
Ethylbenzene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.

Skin contact : No known significant effects or critical hazards.

Ingestion : Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	155541.1 mg/kg
Inhalation (gases)	180861.7 ppm

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Acetone	Acute EC50 20.565 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 6000000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours
	Acute LC50 10000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 5600 ppm Fresh water	Fish - Poecilia reticulata	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - Daphniidae	21 days
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 5 µg/l Marine water	Fish - Gasterosteus aculeatus -	42 days

Section 12. Ecological information

		Larvae	
Titanium Dioxide	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours
Xylene	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Ethylbenzene	Acute EC50 4600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 3600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 6530 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 2930 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Acetone	-	-	Readily
Xylene	-	-	Readily
Ethylbenzene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Titanium Dioxide	-	352	low
Xylene	-	8.1 to 25.9	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1263	UN1263	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3	3	3
Packing group	II	II	II	II	II
Environmental hazards	No.	No.	No.	No.	No.
Additional information	**Special provisions** Not Applicable **ERG No.** 128	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2. 18-2.19 (Class 3). **Special provisions** Not Applicable **ERG No.** 128	**Special provisions** (ERG#128) **ERG No.** 128	**Special provisions** Not Applicable	**Emergency schedules (EmS)** F-E, S-E

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Proper shipping name : Not available.

Ship type : Not available.

Pollution category : Not available.

Section 15. Regulatory information

SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		3
Physical hazards		0

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

Procedure used to derive the classification

Classification	Justification
Flam. Liq. 2, H225	On basis of test data
Eye Irrit. 2A, H319	Calculation method
Carc. 1A, H350	Calculation method
STOT SE 3, H335	Calculation method
STOT SE 3, H336	Calculation method
STOT RE 2, H373	Calculation method

History

Date of printing : 11/27/2015

Date of issue/Date of revision : 11/27/2015

Date of previous issue : 8/15/2015

Version : 1.02

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use

Section 16. Other information

or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

SAFETY DATA SHEET

TM5627

Section 1. Identification

Product name : SETFAST® Low VOC Acrylic Traffic Marking Paint
Lead Free Yellow

Product code : TM5627

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY
101 PROSPECT AVENUE, NW
CLEVELAND, OHIO 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : (800) 524-5979

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
CARCINOGENICITY - Category 1A
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 1.1%

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Highly flammable liquid and vapor.
Causes serious eye irritation.
May cause cancer.
May cause respiratory irritation.
May cause drowsiness and dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Section 2. Hazards identification

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Wash hands thoroughly after handling.

Response : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage : Store locked up. Store in a well-ventilated place. Keep cool.

Disposal Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY. Adequate ventilation required when sanding or abrading the dried film. If Adequate ventilation cannot be provided wear an approved particulate respirator (NIOSH approved). Follow respirator manufacturer's directions for respirator use. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Abrading or sanding of the dry film may release Crystalline Silica which has been shown to cause lung damage and cancer under long term exposure.

Please refer to the SDS for additional information. Do not transfer contents to other containers for storage.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Acetone	≥25 - <50	67-64-1
Titanium Dioxide	≥1 - <3	13463-67-7
Xylene	≥2 - <3	1330-20-7
Ethylbenzene	≥0.3 - <1	100-41-4
Quartz	≥0.1 - <0.3	14808-60-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.

Skin contact : No known significant effects or critical hazards.

Ingestion : Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Section 4. First aid measures

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Section 6. Accidental release measures

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Acetone	**ACGIH TLV (United States, 3/2015).** TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes. **NIOSH REL (United States, 10/2013).** TWA: 250 ppm 10 hours. TWA: 590 mg/m³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 1000 ppm 8 hours. TWA: 2400 mg/m³ 8 hours.
Titanium Dioxide	**ACGIH TLV (United States, 3/2015).**

	TWA: 10 mg/m³ 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 15 mg/m³ 8 hours. Form: Total dust
Xylene	**ACGIH TLV (United States, 3/2015).** TWA: 100 ppm 8 hours. TWA: 434 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 651 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.
Ethylbenzene	**ACGIH TLV (United States, 3/2015).** TWA: 20 ppm 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 100 ppm 10 hours. TWA: 435 mg/m³ 10 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.
Quartz	**OSHA PEL Z3 (United States, 2/2013).** TWA: 250 MPPCF / (%SiO2+5) 8 hours. Form: Respirable TWA: 10 MG/M3 / (%SiO2+2) 8 hours. Form: Respirable **ACGIH TLV (United States, 3/2015).** TWA: 0.025 mg/m³ 8 hours. Form: Respirable fraction **NIOSH REL (United States, 10/2013).** TWA: 0.05 mg/m³ 10 hours. Form: respirable dust

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Section 8. Exposure controls/personal protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : 55°C (131°F)

Flash point : Closed cup: -17°C (1.4°F) [Pensky-Martens Closed Cup]

Evaporation rate : 5.6 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Lower: 1%
Upper: 12.8%

Vapor pressure : 3.2 kPa (23.998 mm Hg) [at 20°C]

Vapor density : 2 [Air = 1]

Relative density : 1.37

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (room temperature): >0.205 cm^2/s (>20.5 cSt)
Kinematic (40°C (104°F)): >0.205 cm^2/s (>20.5 cSt)

Molecular weight : Not applicable.

Aerosol product

Heat of combustion : 9.8 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Acetone	LD50 Oral	Rat	5800 mg/kg	-
Xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
Ethylbenzene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Acetone	Eyes - Mild irritant	Human	-	186300 parts per million	-
	Eyes - Mild irritant	Rabbit	-	10 microliters	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	395 milligrams	-
Titanium Dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-
Xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	100 Percent	-
Ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-

Section 11. Toxicological information

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Titanium Dioxide	-	2B	-
Xylene	-	3	-
Ethylbenzene	-	2B	-
Quartz	-	1	Known to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Xylene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Ethylbenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 2	Not determined	Not determined
Xylene	Category 2	Not determined	Not determined
Ethylbenzene	Category 2	Not determined	Not determined
Quartz	Category 1	Inhalation	Not determined

Aspiration hazard

Name	Result
Xylene	ASPIRATION HAZARD - Category 1
Ethylbenzene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.

Skin contact : No known significant effects or critical hazards.

Ingestion : Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	175451 mg/kg
Inhalation (gases)	204012.7 ppm

Section 12. Ecological information

Toxicity

Section 12. Ecological information

Product/ingredient name	Result	Species	Exposure
Acetone	Acute EC50 20.565 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 6000000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours
	Acute LC50 10000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 5600 ppm Fresh water	Fish - Poecilia reticulata	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - Daphniidae	21 days
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 5 µg/l Marine water	Fish - Gasterosteus aculeatus - Larvae	42 days
Titanium Dioxide	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours
Xylene	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Ethylbenzene	Acute EC50 4600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 3600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 6530 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 2930 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Acetone	-	-	Readily
Xylene	-	-	Readily
Ethylbenzene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Titanium Dioxide	-	352	low
Xylene	-	8.1 to 25.9	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere

Section 13. Disposal considerations

inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1263	UN1263	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3	3	3
Packing group	II	II	II	II	II
Environmental hazards	No.	No.	No.	No.	No.
Additional information	**Special provisions** Not Applicable **ERG No.** 128	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2. 18-2.19 (Class 3). **Special provisions** Not Applicable **ERG No.** 128	**Special provisions** (ERG#128) **ERG No.** 128	**Special provisions** Not Applicable	**Emergency schedules (EmS)** F-E, S-E

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Proper shipping name : Not available.

Ship type : Not available.

Pollution category : Not available.

Section 15. Regulatory information

SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		3
Physical hazards		0

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

Procedure used to derive the classification

Classification	Justification
Flam. Liq. 2, H225	On basis of test data
Eye Irrit. 2A, H319	Calculation method
Carc. 1A, H350	Calculation method
STOT SE 3, H335	Calculation method
STOT SE 3, H336	Calculation method
STOT RE 2, H373	Calculation method

History

Date of printing : 1/26/2016

Date of issue/Date of revision : 1/26/2016

Date of previous issue : 10/28/2015

Version : 1.05

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use

Section 16. Other information

or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

MATERIAL SAFETY DATA SHEET

TM2321
11 00

DATE OF PREPARATION
Aug 20, 2014

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
TM2321
PRODUCT NAME
Premium Fast Dry Waterborne, Lead Free Yellow
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 368-2026
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
3	**67-56-1**	**Methanol**		
		ACGIH TLV	200 ppm (Skin)	92 mm
		ACGIH TLV	250 ppm (Skin) STEL	
		OSHA PEL	200 ppm (Skin)	
		OSHA PEL	250 ppm (Skin) STEL	
49	**1317-65-3**	**Calcium Carbonate**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	
1	**13463-67-7**	**Titanium Dioxide**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	3*
Flammability	2
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.
Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:
- the liver
- the urinary system

SIGNS AND SYMPTOMS OF OVEREXPOSURE
Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
150 °F PMCC	6.0	36.5	Combustible, Flash above 99 and below 200 °F

EXTINGUISHING MEDIA
Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS
Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.
Application to hot surfaces requires special precautions.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES
Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY
DOL Storage Class IIIA

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE
Contents are COMBUSTIBLE. Keep away from heat and open flame.
Consult NFPA Code. Use approved Bonding and Grounding procedures.
Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE
Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.
This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

VENTILATION
Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION
If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.
When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES
Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION
Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS
Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	13.96 lb/gal	1672 g/l
SPECIFIC GRAVITY	1.68	
BOILING POINT	148 - 213 °F	64 - 100 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	37%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	7.5	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.82 lb/gal	98 g/l	Less Water and Federally Exempt Solvents
0.58 lb/gal	70 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

TOXICOLOGY DATA

CAS No.	Ingredient Name				
67-56-1	**Methanol**				
		LC50	RAT	4HR	64000 ppm
		LD50	RAT		5630 mg/kg
1317-65-3	**Calcium Carbonate**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
13463-67-7	**Titanium Dioxide**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)
Not Regulated for Transportation.
Canada (TDG)
Not Regulated for Transportation.
IMO
Not Regulated for Transportation.
IATA/ICAO
Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
67-56-1	Methanol	3	

CALIFORNIA PROPOSITION 65
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
TSCA CERTIFICATION
All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

SAFETY DATA SHEET

TM5712

Section 1. Identification

Product name : PROMAR® Solvent Based Acrylic Traffic Marking Paint White

Product code : TM5712

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : SHERWIN-WILLIAMS - TRAFFIC PAINT
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OHIO 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : (800) 368-2026

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
CARCINOGENICITY - Category 1A
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 2.1%

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Highly flammable liquid and vapor.
Causes serious eye irritation.
May cause cancer.
May cause respiratory irritation.
May cause drowsiness and dizziness.
May cause damage to organs through prolonged or repeated exposure.

Section 2. Hazards identification

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Wash hands thoroughly after handling.

Response : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage : Store locked up. Store in a well-ventilated place. Keep cool.

Disposal Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY. Adequate ventilation required when sanding or abrading the dried film. If Adequate ventilation cannot be provided wear an approved particulate respirator (NIOSH approved). Follow respirator manufacturer's directions for respirator use. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Abrading or sanding of the dry film may release Crystalline Silica which has been shown to cause lung damage and cancer under long term exposure.

Please refer to the SDS for additional information. Do not transfer contents to other containers for storage.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Acetone	≥16 - <25	67-64-1
Xylene	≥5 - <10	1330-20-7
Titanium Dioxide	≥3 - <5	13463-67-7
Chlorinated Paraffin	≥2 - <3	63449-39-8
Ethylbenzene	≥0.3 - <1	100-41-4
Quartz	≥0.1 - <0.3	14808-60-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.

Skin contact : No known significant effects or critical hazards.

Ingestion : Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Section 4. First aid measures

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Acetone	**ACGIH TLV (United States, 3/2015).** TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes. **NIOSH REL (United States, 10/2013).** TWA: 250 ppm 10 hours. TWA: 590 mg/m³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 1000 ppm 8 hours. TWA: 2400 mg/m³ 8 hours.
Xylene	**ACGIH TLV (United States, 3/2015).** TWA: 100 ppm 8 hours. TWA: 434 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 651 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).**

	TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.
Titanium Dioxide	**ACGIH TLV (United States, 3/2015).** TWA: 10 mg/m³ 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 15 mg/m³ 8 hours. Form: Total dust
Chlorinated Paraffin	None.
Ethylbenzene	**ACGIH TLV (United States, 3/2015).** TWA: 20 ppm 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 100 ppm 10 hours. TWA: 435 mg/m³ 10 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.
Quartz	**OSHA PEL Z3 (United States, 2/2013).** TWA: 250 MPPCF / (%SiO2+5) 8 hours. Form: Respirable TWA: 10 MG/M3 / (%SiO2+2) 8 hours. Form: Respirable **ACGIH TLV (United States, 3/2015).** TWA: 0.025 mg/m³ 8 hours. Form: Respirable fraction **NIOSH REL (United States, 10/2013).** TWA: 0.05 mg/m³ 10 hours. Form: respirable dust

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Section 8. Exposure controls/personal protection

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : 55°C (131°F)

Flash point : Closed cup: -17°C (1.4°F) [Pensky-Martens Closed Cup]

Evaporation rate : 5.6 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Lower: 1%
Upper: 12.8%

Vapor pressure : 3.2 kPa (23.998 mm Hg) [at 20°C]

Vapor density : 2 [Air = 1]

Relative density : 1.41

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (room temperature): >0.205 cm^2/s (>20.5 cSt)
Kinematic (40°C (104°F)): >0.205 cm^2/s (>20.5 cSt)

Molecular weight : Not applicable.

Aerosol product

Heat of combustion : 9.611 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Section 10. Stability and reactivity

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Acetone	LD50 Oral	Rat	5800 mg/kg	-
Xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
Ethylbenzene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Acetone	Eyes - Mild irritant	Human	-	186300 parts per million	-
	Eyes - Mild irritant	Rabbit	-	10 microliters	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	20 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	395 milligrams	-
Xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	100 Percent	-
Titanium Dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-
Ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Section 11. Toxicological information

Classification

Product/ingredient name	OSHA	IARC	NTP
Xylene	-	3	-
Titanium Dioxide	-	2B	-
Ethylbenzene	-	2B	-
Quartz	-	1	Known to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Xylene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Chlorinated Paraffin	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Ethylbenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 2	Not determined	Not determined
Xylene	Category 2	Not determined	Not determined
Chlorinated Paraffin	Category 2	Not determined	Not determined
Ethylbenzene	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
Xylene	ASPIRATION HAZARD - Category 1
Ethylbenzene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.

Skin contact : No known significant effects or critical hazards.

Ingestion : Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	85121.3 mg/kg
Inhalation (gases)	98978.2 ppm

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Acetone	Acute EC50 20.565 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 6000000 µg/l Fresh water	Crustaceans - Gammarus pulex	48 hours
	Acute LC50 10000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 5600 ppm Fresh water	Fish - Poecilia reticulata	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - Daphniidae	21 days
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 5 µg/l Marine water	Fish - Gasterosteus aculeatus -	42 days

Section 12. Ecological information

		Larvae	
Xylene	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Titanium Dioxide	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours
Ethylbenzene	Acute EC50 4600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 3600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 6530 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 2930 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Acetone	-	-	Readily
Xylene	-	-	Readily
Ethylbenzene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Xylene	-	8.1 to 25.9	low
Titanium Dioxide	-	352	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1263	UN1263	UN1263	UN1263	UN1263
UN proper shipping name	PAINT	PAINT	PAINT	PAINT	PAINT
Transport hazard class(es)	3	3	3	3	3
Packing group	II	II	II	II	II
Environmental hazards	No.	No.	No.	No.	No.
Additional information	**Special provisions** Not Applicable **ERG No.** 128	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2. 18-2.19 (Class 3). **Special provisions** Not Applicable **ERG No.** 128	**Special provisions** (ERG#128) **ERG No.** 128	**Special provisions** Not Applicable	**Emergency schedules (EmS)** F-E, S-E

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Proper shipping name : Not available.

Ship type : Not available.

Pollution category : Not available.

Section 15. Regulatory information

SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		3
Physical hazards		0

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

Procedure used to derive the classification

Classification	Justification
Flam. Liq. 2, H225	On basis of test data
Eye Irrit. 2A, H319	Calculation method
Carc. 1A, H350	Calculation method
STOT SE 3, H335	Calculation method
STOT SE 3, H336	Calculation method
STOT RE 2, H373	Calculation method

History

Date of printing : 11/28/2015

Date of issue/Date of revision : 11/28/2015

Date of previous issue : 8/15/2015

Version : 1.02

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use

Section 16. Other information

or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

SHERWIN-WILLIAMS CO -- SWP EXTERIOR GLOSS OIL BASE PAINT, BASE C, A2G40 -- 8010-00N018232

========== Product Identification ==========

Product ID:SWP EXTERIOR GLOSS OIL BASE PAINT, BASE C, A2G40
MSDS Date:04/23/1997
FSC:8010
NIIN:00N018232
MSDS Number: CFZGV
=== Responsible Party ===
Company Name:SHERWIN-WILLIAMS CO
Address:101 PROSPECT AVE NW
City:CLEVELAND
State:OH
ZIP:44115
Country:US
Info Phone Num:216-566-2902
Emergency Phone Num:216-566-2917
CAGE:54636
=== Contractor Identification ===
Company Name:SHERWIN-WILLIAMS CO THE
Address:101 PROSPECT AVE NW
Box:City:CLEVELAND
State:OH
ZIP:44115-1042
Country:US
Phone:800-251-2486/216-566-2242
CAGE:54636

========== Composition/Information on Ingredients ==========

Ingred Name:EFTS OF OVEREXP: ITS CARCINOGENICITY. PRLNG OVEREXP TO SOLV
INGS MAY CAUSE ADVERSE EFTS TO LIVER, URINARY & (ING 9)
RTECS #:9999999ZZ

Ingred Name:ING 8: REPRO SYS. REPORTS HAVE ASSOCIATED REPEATED &
PROLONGED OVEREXP TO SOLVS W/PERMANENT BRAIN & NERVOUS SYS DAMAGE.
RTECS #:9999999ZZ

Ingred Name:EXPLAN OF CARCIN: VOL 68, 1997: GROUP 1. NTP 7TH ANNUAL RPT
ON CARCINS, 1994: ANTIC TO BE CARCIN. HUMAN: LUNG.
RTECS #:9999999ZZ

Ingred Name:OTHER PREC: INHALING CONTENTS CAN BE HARMFUL/FATAL. THIS
COATING MAY CONTAIN MATLS CLASSIFIED AS NUISANCE (ING 12)
RTECS #:9999999ZZ

Ingred Name:ING 11: PARTICULATES WHICH MAY BE PRESENT AT HAZARDOUS
LEVELS ONLY DURING SANDING/ABRADING OF THE DRIED FILM.
RTECS #:9999999ZZ

Ingred Name:CARBON BLACK; VP: 0.00
CAS:1333-86-4
RTECS #:FF5800000
Fraction by Wt: 0.2%
OSHA PEL:3.5 MG/M3
ACGIH TLV:3.5 MG/M3

Ingred Name:SOLVENT NAPHTHA, PETROLEUM, MEDIUM ALIPHATIC; (MINERAL SPIRITS) VP: 2.00
CAS:64742-88-7
RTECS #:WF3450000
Fraction by Wt: 9%
OSHA PEL:100 PPM (MFR)
ACGIH TLV:100 PPM (MFR)

Ingred Name:SOLVENT NAPHTHA, PETROLEUM, MEDIUM ALIPHATIC; (MINERAL SPIRITS 140-FLASH) VP: 0.50
CAS:64742-88-7
RTECS #:WF3450000
Fraction by Wt: 24%
OSHA PEL:100 PPM (MFR)
ACGIH TLV:100 PPM (MFR)

Ingred Name:XYLENE (SARA 313) (CERCLA) VP: 5.90
CAS:1330-20-7
RTECS #:ZE2100000
Fraction by Wt: 2%
OSHA PEL:100 PPM
ACGIH TLV:100 PPM/150 STEL
EPA Rpt Qty:1000 LBS
DOT Rpt Qty:1000 LBS

Ingred Name:COBALT 2-ETHYLHEXANOATE; VP: 0.00
CAS:136-52-7
Fraction by Wt: 0.2%
OSHA PEL:N/K
ACGIH TLV:N/K

Ingred Name:SILICA, CRYSTALLINE - QUARTZ; (QUARTZ)
CAS:14808-60-7
RTECS #:VV7330000
Fraction by Wt: 12%
OSHA PEL:SEE TABLE Z-3
ACGIH TLV:0.1 MG/M3 RDUST

========== Hazards Identification ==========

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.
Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO
Reports of Carcinogenicity:NTP:YES IARC:YES OSHA:NO
Health Hazards Acute and Chronic:ACUTE: IRRIT OF EYES, SKIN & RESP SYS. MAY CAUSE NERV SYS DEPRESS. EXTREME OVEREXP MAY RSLT IN UNCON & POSS DEATH. SIGNS & SYMPS OF OVEREXP: HDCH, DIZZ, NAUS, LOSS OF COORD ARE INDICATIONS OF EXCESS E XPOS TO VAPS/SPRAY MISTS. REDNESS & ITCH/BURNING SENSATION MAY INDICATE EYE/EXCESS SKIN EXPOS. (EFTS OF OVEREXP)
Explanation of Carcinogenicity:CARBON BLACK: IARC MONO, VOL 65, PG 149, 1996: GROUP 2B. ANIMAL: LUNG. SILICA, CRYSTALLINE-QUARTZ: IARC MONO, (ING 10)
Effects of Overexposure:HLTH HAZ: CHRONIC: LONG TERM EXPOS TO HIGH LEVELS OF SILICA DUST, WHICH CAN OCCUR ONLY WHEN SANDING/ABRADING DRY FILM, MAY CAUSE LUNG DMG (SILICOSIS) & POSS CANCER. COBALT & COBALT CMPDS ARE CLASSIFIE D AS POSS CARCIN TO HUMANS (GROUP 2B) BASED ON EXPT ANIMAL DATA, HOWEVER, THERE IS INADEQ EVIDENCE IN HUMANS FOR (ING 8)
Medical Cond Aggravated by Exposure:NONE GENERALLY RECOGNIZED.

First Aid Measures

First Aid:INHALATION: IF AFFECTED, REMOVE FROM EXPOSURE. RESTORE BREATHING. KEEP WARM AND QUIET. SKIN: WASH AFFECTED AREA THOROUGHLY WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND LAUNDER BEFORE REUSE. E YES: FLUSH WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION. INGESTION: GET MEDICAL ATTENTION.

Fire Fighting Measures

Flash Point Method:PMCC
Flash Point:102F,39C
Lower Limits:0.9%
Upper Limits:7.0%
Extinguishing Media:CARBON DIOXIDE, DRY CHEMICAL, FOAM.
Fire Fighting Procedures:WEAR NIOSH APPRVD SCBA & FULL PROT EQUIP . WATER SPRAY MAY BE INEFFECTIVE. IF WATER IS USED, FOG NOZZ ARE PREF. WATER MAY BE USED TO COOL CLSD (SUP DAT)
Unusual Fire/Explosion Hazard:KEEP CONTRS TIGHTLY CLSD. ISOLATE FROM HEAT, ELEC EQUIP, SPKS, & OPEN FLAME. CLSD CONTRS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT. APPLICATION TO HOT (SUP DAT)

Accidental Release Measures

Spill Release Procedures:REMOVE ALL SOURCES OF IGNITION. VENTILATE AND REMOVE WITH INERT ABSORBENT.
Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

Handling and Storage

Handling and Storage Precautions:USE ONLY W/ADEQ VENT. AVOID BRTHG VAP & SPRAY MIST. AVOID CONT W/SKIN & EYES. CONTENTS COMBUST. KEEP AWAY FROM HEAT & OPEN FLAME. CONSULT NFPA CODE.
Other Precautions:USE APPRVD BONDING & GROUNDING PROC. KEEP CONTR CLSD WHEN NOT IN USE. TRANSFER ONLY TO APPRVD CONTRS W/COMPLETE & APPROP LABELING. DO NOT TAKE INTERNALLY. KEEP OUT OF REACH OF CHILDREN. INTENTIONAL MI SUSE BY DELIBERATELY CONC & (ING 11)

Exposure Controls/Personal Protection

Respiratory Protection:IF PERS EXPOS CANNOT BE CONTROLLED BELOW APPLIC LIMS BY VENT, WEAR PROPERLY FITTED ORG VAP/PARTICULATE RESP APPRVD BY NIOSH FOR PROT. WHEN SANDING/ABRADING DRIED FILM, WEAR DUST/MIST RESP APPRVD BY NI OSH FOR DUST WHICH MAY BE (SUP DAT)
Ventilation:LOC EXHST PREF. GEN EXHST ACCEPTABLE IF EXPOS MAINT < APPLIC EXPOS LIMS. REFER TO OSHA STDS 1910.94, 1910.107, 1910.108.
Protective Gloves:IMPERVIOUS GLOVES .
Eye Protection:ANSI APPRVD CHEM WORKERS GOGGLES .
Other Protective Equipment:EMERGENCY EYEWASH AND DELUGE SHOWER MEETING ANSI DESIGN CRITERIA .
Work Hygienic Practices:WASH HANDS AFTER USING.
Supplemental Safety and Health
FIRE FIGHT PROC: CONTRS TO PVNT PRESS BUILD-UP & POSS AUTOIGNIT/EXPLO WHEN EXPOSED TO EXTREME HEAT. EXPLO HAZ: SURFS REQUIRES SPECIAL PREC. DURING EMER CNDTNS OVEREXP TO DECOMP PRODS MAY CAUSE HLTH HA Z. SYMPS MAY NOT BE IMMED APPARENT. OBTAIN MED ATTN. RESP PROT: GENERATED FROM THIS PROD, UNDERLYING PAINT/ABRASIVE.

Physical/Chemical Properties

Boiling Pt:B.P. Text:>281F,>138C
Vapor Pres:SEE INGS
Vapor Density:HVR/AIR
Spec Gravity:1.02
VOC Pounds/Gallon:346
VOC Grams/Liter:3.03
Evaporation Rate & Reference:SLOWER THAN ETHER
Appearance and Odor:NONE SPECIFIED BY MANUFACTURER
Percent Volatiles by Volume:46

Stability and Reactivity Data

Stability Indicator/Materials to Avoid:YES
NONE KNOWN.
Stability Condition to Avoid:NONE KNOWN.
Hazardous Decomposition Products:BY FIRE: CARBON DIOXIDE, CARBON MONOXIDE.

Disposal Considerations

Waste Disposal Methods:WASTE FROM PROD MAY BE HAZ AS DEFINED UNDER RCRA 40 CFR 261. WASTE MUST BE TESTED FOR IGNITABILITY TO DETERMINE APPLIC EPA HAZ WASTE NUMBERS. INCIN IN APPRVD FACILITY. DO NOT INCIN CLSD CONTR. DISP OF I/A/W FED, STATE, & LOC REGS REGARDINGPOLLUTION.

Other Information

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MATERIAL SAFETY DATA SHEET

A29W51
06 00

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
A29W51

HMIS CODES

Health	2*
Flammability	0
Reactivity	0

PRODUCT NAME
CLASSIC 99* Interior Satin Latex Wall Paint, Extra White

MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

EMERGENCY TELEPHONE NO.
(216) 566-2917

DATE OF PREPARATION
06-SEP-04

INFORMATION TELEPHONE NO.
(216) 566-2902

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT		UNITS	VAPOR PRESSURE
2	112-34-5	2-(2-Butoxyethoxy)-ethanol			
		ACGIH TLV	Not Available		0.06 mm
		OSHA PEL	Not Available		
3	107-21-1	Ethylene Glycol			
		ACGIH TLV	100	mg/m3 CEILI (aerosol)	0.12 mm
		OSHA PEL	50	ppm CEILING	
0.1	14464-46-1	Cristobalite			
		ACGIH TLV	0.05	mg/m3 as Resp. Dust	
		OSHA PEL	0.05	mg/m3 as Resp. Dust	
6	1332-58-7	Kaolin			
		ACGIH TLV	2	mg/m3 as Resp. Dust	
		OSHA PEL	10	mg/m3 Total Dust	
		OSHA PEL	5	mg/m3 Respirable Fraction	
2	471-34-1	Calcium Carbonate			
		ACGIH TLV	10	mg/m3 as Dust	
		OSHA PEL	15	mg/m3 Total Dust	
		OSHA PEL	5	mg/m3 Respirable Fraction	
14	13463-67-7	Titanium Dioxide			
		ACGIH TLV	10	mg/m3 as Dust	
		OSHA PEL	10	mg/m3 Total Dust	
		OSHA PEL	5	mg/m3 Respirable Fraction	

Section 3 -- HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.
In a confined area vapors in high concentration may cause headache, nausea or dizziness.

Continued on page 2

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

Section 4 -- FIRST AID MEASURES

EYES:	Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN:	Wash affected area thoroughly with soap and water. Remove contaminated clothing and launder before re-use.
INHALATION:	If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION:	Do not induce vomiting. Get medical attention immediately.

Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL
Not Applicable	N.A.	N.A.

FLAMMABILITY CLASSIFICATION

Not Applicable

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

Section 7 -- HANDLING AND STORAGE

STORAGE CATEGORY

Not Applicable

Continued on page 3

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

Continued on page 4

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	10.69 lb/gal	1280 g/l
SPECIFIC GRAVITY	1.29	
BOILING POINT	212 - 448 F	100 - 231 C
MELTING POINT	Not Available	
VOLATILE VOLUME	60 %	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	9.5	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical)

1.19 lb/gal	143 g/l	Less Water and Federally Exempt Solvents
0.54 lb/gal	65 g/l	Emitted VOC

Section 10 -- STABILITY AND REACTIVITY

STABILITY -- Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

Section 11 -- TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.

Ethylene Glycol is considered an animal teratogen. It has been shown to cause birth defects in rats and mice at high doses when given in drinking water or by gavage. There is no evidence to indicate it causes birth defects in humans.

Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver and urinary systems.

Rats exposed to titanium dioxide dust at 250 mg./m3 developed lung cancer, however, such exposure levels are not attainable in the workplace.

TOXICOLOGY DATA

Continued on page 5

CAS No.	Ingredient Name				
112-34-5	2-(2-Butoxyethoxy)-ethanol				
		LC50	RAT	4HR	Not Available
		LD50	RAT		5660 mg/kg
107-21-1	Ethylene Glycol				
		LC50	RAT	4HR	Not Available
		LD50	RAT		4700 mg/kg
14464-46-1	Cristobalite				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
1332-58-7	Kaolin				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
471-34-1	Calcium Carbonate				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
13463-67-7	Titanium Dioxide				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

Section 12 -- ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

Section 13 -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

Section 14 -- TRANSPORT INFORMATION

No data available.

Section 15 -- REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
107-21-1	Ethylene Glycol	3	
	Glycol Ethers	2	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Continued on page 6

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

Section 16 -- OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

SAFETY DATA SHEET

A32W253

Section 1. Identification

Product name : Porch & Floor Satin Enamel
Deep Base

Product code : A32W253

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : Not available.

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : CARCINOGENICITY - Category 2

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 10.8%

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : Suspected of causing cancer.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing.

Response : IF exposed or concerned: Get medical attention.

Storage : Store locked up.

Disposal Dispose of contents and container in accordance with all local, regional, national and international regulations.

Section 2. Hazards identification

Supplemental label elements

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Please refer to the SDS for additional information. Do not transfer contents to other containers for storage.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Titanium Dioxide	≥3 - <5	13463-67-7
zinc oxide	≥1 - <3	1314-13-2

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Section 4. First aid measures

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Section 6. Accidental release measures

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Titanium Dioxide	**ACGIH TLV (United States, 3/2015).** TWA: 10 mg/m³ 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 15 mg/m³ 8 hours. Form: Total dust
zinc oxide	**NIOSH REL (United States, 10/2013).** CEIL: 15 mg/m³ Form: Dust TWA: 5 mg/m³ 10 hours. Form: Dust and fumes STEL: 10 mg/m³ 15 minutes. Form: Fume **OSHA PEL (United States, 2/2013).** TWA: 5 mg/m³ 8 hours. Form: Fume TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust **ACGIH TLV (United States, 3/2015).** TWA: 2 mg/m³ 8 hours. Form: Respirable

	fraction STEL: 10 mg/m³ 15 minutes. Form: Respirable fraction

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : 9

Melting point : Not available.

Boiling point : 100°C (212°F)

Flash point : Closed cup: >93.3°C (>199.9°F)

Evaporation rate : 0.09 (butyl acetate = 1)

Section 9. Physical and chemical properties

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : 0.31 kPa (2.333 mm Hg) [at 20°C]

Vapor density : 1 [Air = 1]

Relative density : 1.17

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (room temperature): >0.205 cm^2/s (>20.5 cSt)
Kinematic (40°C (104°F)): >0.205 cm^2/s (>20.5 cSt)

Molecular weight : Not applicable.

Aerosol product

Heat of combustion : 1.013 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Titanium Dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-
zinc oxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-

Sensitization

Not available.

Mutagenicity

Section 11. Toxicological information

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Titanium Dioxide	-	2B	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	278642.4 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Titanium Dioxide	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours
zinc oxide	Acute IC50 1.85 mg/l Marine water	Algae - Skeletonema costatum	96 hours
	Acute IC50 46 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute LC50 98 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 1.1 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Titanium Dioxide	-	352	low
zinc oxide	-	60960	high

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

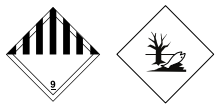
Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains

Section 13. Disposal considerations

and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	UN3082
UN proper shipping name	-	-	-	-	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (zinc oxide). Marine pollutant (zinc oxide)
Transport hazard class(es)	-	-	-	-	9 
Packing group	-	-	-	-	III
Environmental hazards	No.	No.	No.	No.	Yes.
Additional information	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Special provisions** Not Applicable	The environmentally hazardous substance mark may appear if required by other transportation regulations. **Special provisions** Not Applicable	This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. **Emergency schedules (EmS)** F-A, S-F

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Proper shipping name : Not available.

Ship type : Not available.

Pollution category : Not available.

Section 15. Regulatory information

SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	1
Flammability		0
Physical hazards		0

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

Procedure used to derive the classification

Classification	Justification
Carc. 2, H351	Calculation method

History

Date of printing : 11/27/2015

Date of issue/Date of revision : 11/27/2015

Date of previous issue : 10/17/2015

Version : 2.01

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the

Section 16. Other information

product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

MATERIAL SAFETY DATA SHEET

A41W210
18 00

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER	DATE OF PREPARATION	HMIS CODES	
		Health	2*
A41W210	01-JUL-08	Flammability	0
		Reactivity	0

PRODUCT NAME
ALL SURFACE ENAMEL - Acrylic Latex Primer, White

MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

TELEPHONE NUMBERS and WEBSITES
Product Information
www.sherwin-williams.com
Regulatory Information
(216) 566-2902 www.paintdocs.com
Medical Emergency
(216) 566-2917
Transportation Emergency for Chemical Emergency ONLY (spill, leak,
(800) 424-9300 fire, exposure, or accident)

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT		UNITS	VAPOR PRESSURE
1	112-34-5	2-(2-Butoxyethoxy)-ethanol			
		ACGIH TLV	Not Available		0.06 mm
		OSHA PEL	Not Available		
0.1	14808-60-7	Quartz			
		ACGIH TLV	0.025	mg/m3 as Resp. Dust	
		OSHA PEL	0.1	mg/m3 as Resp. Dust	
26	471-34-1	Calcium Carbonate			
		ACGIH TLV	10	mg/m3 as Dust	
		OSHA PEL	15	mg/m3 Total Dust	
		OSHA PEL	5	mg/m3 Respirable Fraction	
9	13463-67-7	Titanium Dioxide			
		ACGIH TLV	10	mg/m3 as Dust	
		OSHA PEL	10	mg/m3 Total Dust	
		OSHA PEL	5	mg/m3 Respirable Fraction	
2.61		Barium (as Ba; total)			

Section 3 -- HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

Continued on page 2

EFFECTS OF OVEREXPOSURE

EYES: Irritation.

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

Section 4 -- FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area thoroughly with soap and water. Remove contaminated clothing and launder before re-use.

INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.

INGESTION: Do not induce vomiting. Get medical attention immediately.

Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL
Not Applicable	N.A.	N.A.

FLAMMABILITY CLASSIFICATION

Not Applicable

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

Continued on page 3

Section 7 -- HANDLING AND STORAGE

STORAGE CATEGORY
Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE
Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE
Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.
This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

VENTILATION
Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION
If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.
When sanding, wirebrushing, abrading, burning or welding the dried film, wear a particulate respirator approved by NIOSH/MSHA for protection against non-volatile materials in Section 2.

PROTECTIVE GLOVES
Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION
Wear safety spectacles with unperforated sideshields.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	11.45 lb/gal	1372 g/l
SPECIFIC GRAVITY	1.38	
BOILING POINT	212 - 500 F	100 - 260 C
MELTING POINT	Not Available	
VOLATILE VOLUME	53 %	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	9.5	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

1.11 lb/gal	133 g/l	Less Water and Federally Exempt Solvents
0.60 lb/gal	72 g/l	Emitted VOC

Continued on page 4

Section 10 -- STABILITY AND REACTIVITY

STABILITY -- Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide, Oxides of Metals in Section 2

HAZARDOUS POLYMERIZATION

Will not occur

Section 11 -- TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

TOXICOLOGY DATA

CAS No.	Ingredient Name				
112-34-5	2-(2-Butoxyethoxy)-ethanol				
		LC50	RAT	4HR	Not Available
		LD50	RAT		5660 mg/kg
14808-60-7	Quartz				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
471-34-1	Calcium Carbonate				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
13463-67-7	Titanium Dioxide				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

Section 12 -- ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

Continued on page 5

Section 13 -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for extractability to determine the applicable EPA hazardous waste numbers.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

Section 14 -- TRANSPORT INFORMATION

US Ground (DOT)

Not Regulated for Transportation.

Canada (TDG)

Not Regulated for Transportation.

IMO

Not Regulated for Transportation.

Section 15 -- REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
	Barium Compound	5	2.6
	Glycol Ethers	1	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

Section 16 -- OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

SAFETY DATA SHEET

A44W50

Section 1. Identification

Product name : TUFF SURFACE Premium Texture Coating

Product code : A44W50

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : Not available.

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : CARCINOGENICITY - Category 2

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : Suspected of causing cancer.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing.

Response : IF exposed or concerned: Get medical attention.

Storage : Store locked up.

Disposal Dispose of contents and container in accordance with all local, regional, national and international regulations.

Section 2. Hazards identification

Supplemental label elements

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Adequate ventilation required when sanding or abrading the dried film. If Adequate ventilation cannot be provided wear an approved particulate respirator (NIOSH approved). Follow respirator manufacturer's directions for respirator use. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Abrading or sanding of the dry film may release Crystalline Silica which has been shown to cause lung damage and cancer under long term exposure.

Please refer to the SDS for additional information. Do not transfer contents to other containers for storage.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Titanium Dioxide	≥1 - <3	13463-67-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Section 4. First aid measures

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions :

Section 6. Accidental release measures

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Titanium Dioxide	**ACGIH TLV (United States, 3/2015).** TWA: 10 mg/m³ 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 15 mg/m³ 8 hours. Form: Total dust

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Section 8. Exposure controls/personal protection

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : 9.3

Melting point : Not available.

Boiling point : 100°C (212°F)

Flash point : Closed cup: >93.3°C (>199.9°F)

Evaporation rate : 0.09 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : 0.31 kPa (2.333 mm Hg) [at 20°C]

Vapor density : 1 [Air = 1]

Relative density : 1.79

Solubility : Not available.

Section 9. Physical and chemical properties

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (room temperature): >0.205 cm^2/s (>20.5 cSt)
Kinematic (40°C (104°F)): >0.205 cm^2/s (>20.5 cSt)

Molecular weight : Not applicable.

Aerosol product

Heat of combustion : 0.72 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Titanium Dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Titanium Dioxide	-	2B	-

Reproductive toxicity

Not available.

Teratogenicity

Section 11. Toxicological information

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Titanium Dioxide	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Titanium Dioxide	-	352	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.

Section 14. Transport information

Additional information	Special provisions	Special provisions	Special provisions	Special provisions	Emergency schedules (EmS)
	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Proper shipping name : Not available.

Ship type : Not available.

Pollution category : Not available.

Section 15. Regulatory information

SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	1
Flammability		0
Physical hazards		0

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

Procedure used to derive the classification

Classification	Justification
Carc. 2, H351	Calculation method

History

Date of printing : 12/28/2015

Date of issue/Date of revision : 12/28/2015

Date of previous issue : 11/27/2015

Version : 1.04

Section 16. Other information

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

MATERIAL SAFETY DATA SHEET

A82T154
15 00

DATE OF PREPARATION
Dec 19, 2010

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
A82T154
PRODUCT NAME
A-100® Exterior Satin Latex Paint, Ultradeep Base
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
0.1	**14464-46-1**	**Cristobalite**		
		ACGIH TLV	0.025 mg/m3 as Resp. Dust	
		OSHA PEL	0.05 mg/m3 as Resp. Dust	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	1*
Flammability	0
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.
SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	N.A.	N.A.	Not Applicable

EXTINGUISHING MEDIA
Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	9.34 lb/gal	1119 g/l
SPECIFIC GRAVITY	1.12	
BOILING POINT	212 - 213 °F	100 - 100 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	60%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	9.0	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.41 lb/gal	49 g/l	Less Water and Federally Exempt Solvents
0.17 lb/gal	20 g/l	Emitted VOC

VOLATILE ORGANIC COMPOUNDS (VOC - As Applied)

<0.41 lb/gal	<50 g/l	Less Water and Federally Exempt Solvents

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable
CONDITIONS TO AVOID
None known.
INCOMPATIBILITY
None known.
HAZARDOUS DECOMPOSITION PRODUCTS
By fire: Carbon Dioxide, Carbon Monoxide
HAZARDOUS POLYMERIZATION
Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS
Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.
TOXICOLOGY DATA

CAS No.	Ingredient Name				
14464-46-1	**Cristobalite**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION
No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD
Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

US Ground (DOT)
Not Regulated for Transportation.
Canada (TDG)
Not Regulated for Transportation.
IMO
Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element

No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.
CALIFORNIA PROPOSITION 65
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
TSCA CERTIFICATION
All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

A89W1151
05 00

DATE OF PREPARATION
Sep 7, 2008

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
A89W1151
PRODUCT NAME
SUPERPAINT® Exterior Latex Satin Paint, Extra White
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
0.1	**14464-46-1**	**Cristobalite**		
		ACGIH TLV	0.025 mg/m3 as Resp. Dust	
		OSHA PEL	0.05 mg/m3 as Resp. Dust	
13	**13463-67-7**	**Titanium Dioxide**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	
2	**1314-13-2**	**Zinc Oxide**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	1*
Flammability	0
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.
SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	N.A.	N.A.	Not Applicable

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

- Remove all sources of ignition. Ventilate the area.
- Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	10.24 lb/gal	1227 g/l
SPECIFIC GRAVITY	1.23	
BOILING POINT	212 - 213° F	100 - 100° C
MELTING POINT	Not Available	
VOLATILE VOLUME	62%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	9.0	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.41lb/gal	49g/l	Less Water and Federally Exempt Solvents
0.16lb/gal	19g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

TOXICOLOGY DATA

CAS No.	Ingredient Name				
14464-46-1	**Cristobalite**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
13463-67-7	**Titanium Dioxide**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
1314-13-2	**Zinc Oxide**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

US Ground (DOT)

Not Regulated for Transportation.

Canada (TDG)

Not Regulated for Transportation.

IMO

Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
	Zinc Compound	2	1.9

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

A97R1258
12 00

DATE OF PREPARATION
Sep 8, 2013

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
A97R1258
PRODUCT NAME
DURATION HOME™ Interior Latex Satin Coating, Real Red
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units		Vapor Pressure
1	**112-34-5**	**2-(2-Butoxyethoxy)-ethanol**			
		ACGIH TLV	Not Available		0.06 mm
		OSHA PEL	Not Available		
0.9	**14808-60-7**	**Quartz**			
		ACGIH TLV	0.025	mg/m3 as Resp. Dust	
		OSHA PEL	0.1	mg/m3 as Resp. Dust	
0.2	**14464-46-1**	**Cristobalite**			
		ACGIH TLV	0.025	mg/m3 as Resp. Dust	
		OSHA PEL	0.05	mg/m3 as Resp. Dust	
1	**13463-67-7**	**Titanium Dioxide**			
		ACGIH TLV	10	mg/m3 as Dust	
		OSHA PEL	10	mg/m3 Total Dust	
		OSHA PEL	5	mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	2*
Flammability	0
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.
SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	Not Applicable	Not Applicable	Not Applicable

EXTINGUISHING MEDIA
Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS
Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES
Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY
Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE
Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE
Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.
This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).
Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

VENTILATION
Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION
If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.
When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES
Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION
Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	8.91 lb/gal	1068 g/l
SPECIFIC GRAVITY	1.07	
BOILING POINT	212 - 448 °F	100 - 231 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	66%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	9.0	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.30 lb/gal	37 g/l	Less Water and Federally Exempt Solvents
0.10 lb/gal	12 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

TOXICOLOGY DATA

CAS No.	Ingredient Name				
112-34-5	**2-(2-Butoxyethoxy)-ethanol**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		5660 mg/kg
14808-60-7	**Quartz**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
14464-46-1	**Cristobalite**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
13463-67-7	**Titanium Dioxide**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

Not Regulated for Transportation.

Canada (TDG)

Not Regulated for Transportation.

IMO

Not Regulated for Transportation.

IATA/ICAO

Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
	Glycol Ethers	1	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

ACETONE/SW
17 00

DATE OF PREPARATION
Aug 7, 2016

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
ACETONE/SW
PRODUCT NAME
Acetone
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 W. Prospect Avenue
Cleveland, OH 44115

Telephone Numbers and Websites

Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient		Units	Vapor Pressure
100	**67-64-1**	**Acetone**			
			ACGIH TLV	500 PPM	180 mm
			ACGIH TLV	750 PPM STEL	
			OSHA PEL	1000 PPM	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	1
Flammability	3
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.
SIGNS AND SYMPTOMS OF OVEREXPOSURE
Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
1 °F PMCC	2.6	12.8	RED LABEL -- Extremely Flammable, Flash below 21 °F (-6 °C)

EXTINGUISHING MEDIA
Carbon Dioxide, Dry Chemical, Foam
UNUSUAL FIRE AND EXPLOSION HAZARDS
Closed containers may explode when exposed to extreme heat.
Application to hot surfaces requires special precautions.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.
SPECIAL FIRE FIGHTING PROCEDURES
Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY
DOL Storage Class IB
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE
Contents are EXTREMELY FLAMMABLE. Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.
During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.
Consult NFPA Code. Use approved Bonding and Grounding procedures.
Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE
Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.
VENTILATION
Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.
RESPIRATORY PROTECTION
If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.
PROTECTIVE GLOVES
Wear gloves which are recommended by glove supplier for protection against materials in Section 2.
EYE PROTECTION
Wear safety spectacles with unperforated sideshields.
OTHER PRECAUTIONS
Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	6.59 lb/gal	789 g/l
SPECIFIC GRAVITY	0.79	
BOILING POINT	132 - 134 °F	55 - 56 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	100%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.00 lb/gal	0 g/l	Less Water and Federally Exempt Solvents
0.00 lb/gal	0 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable
CONDITIONS TO AVOID
None known.
INCOMPATIBILITY
None known.
HAZARDOUS DECOMPOSITION PRODUCTS
By fire: Carbon Dioxide, Carbon Monoxide
HAZARDOUS POLYMERIZATION
Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS
No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.
Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.
TOXICOLOGY DATA

CAS No.	Ingredient Name				
67-64-1	**Acetone**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		5800 mg/kg

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION
No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD
Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.
Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.
US Ground (DOT)
1 Liter (1.1 Quarts) and Less may be Classed as LTD. QTY. (PAINT OR RELATED).
Larger Containers are Regulated as:
UN1090, ACETONE, 3, PG II, (ERG#127)
DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities
Acetone 5000 lb RQ
Bulk Containers may be Shipped as (check reportable quantities):
UN1090, ACETONE, 3, PG II, (ERG#127)
Canada (TDG)
UN1090, ACETONE, 3, PG II, (ERG#127)
IMO
1 Liter (1.1 Quarts) and Less may be Shipped as Limited Quantity.
UN1090, ACETONE, 3, PG II, (-17 C c.c.), EmS F-E, S-D
IMO
1 Liter (1.1 Quarts) and Less may be Shipped as Limited Quantity.
UN1090, ACETONE, 3, PG II, (-17 C c.c.), EmS F-E, S-D
IATA/ICAO
UN1090, ACETONE, 3, PG II

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element

No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

B2W900
08 00

DATE OF PREPARATION
Apr 22, 2009

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
B2W900
PRODUCT NAME
SherStripe™ Exterior Acrylic Latex Athletic Field Marking Paint, Bright White
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units		Vapor Pressure
1	**107-21-1**	**Ethylene Glycol**			
		ACGIH TLV	100	MG/M3 CEILING (aerosol)	0.12 mm
		OSHA PEL	50	PPM CEILING	
0.1	**14464-46-1**	**Cristobalite**			
		ACGIH TLV	0.025	mg/m3 as Resp. Dust	
		OSHA PEL	0.05	mg/m3 as Resp. Dust	
42	**471-34-1**	**Calcium Carbonate**			
		ACGIH TLV	10	mg/m3 as Dust	
		OSHA PEL	15	mg/m3 Total Dust	
		OSHA PEL	5	mg/m3 Respirable Fraction	
3	**13463-67-7**	**Titanium Dioxide**			
		ACGIH TLV	10	mg/m3 as Dust	
		OSHA PEL	10	mg/m3 Total Dust	
		OSHA PEL	5	mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	2*
Flammability	0
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.
Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver and urinary systems.
SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	N.A.	N.A.	Not Applicable

EXTINGUISHING MEDIA
Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS
Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES
Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
- Remove all sources of ignition. Ventilate the area.
- Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY
Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE
Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE
Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.
This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).
Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

VENTILATION
Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION
If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.
When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES
Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION
Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	11.97 lb/gal	1434 g/l
SPECIFIC GRAVITY	1.44	
BOILING POINT	212 - 388 °F	100 - 197 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	69%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	9.5	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.71lb/gal	85g/l	Less Water and Federally Exempt Solvents
0.23lb/gal	28g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

Ethylene Glycol is considered an animal teratogen. It has been shown to cause birth defects in rats and mice at high doses when given in drinking water or by gavage. There is no evidence to indicate it causes birth defects in humans.

TOXICOLOGY DATA

CAS No.	Ingredient Name				
107-21-1	**Ethylene Glycol**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		4700 mg/kg
14464-46-1	**Cristobalite**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
471-34-1	**Calcium Carbonate**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
13463-67-7	**Titanium Dioxide**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

US Ground (DOT)
Not Regulated for Transportation.
Canada (TDG)
Not Regulated for Transportation.
IMO
Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
107-21-1	Ethylene Glycol	1	

CALIFORNIA PROPOSITION 65
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
TSCA CERTIFICATION
All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

B20W2651
26 00

DATE OF PREPARATION
Jul 19, 2013

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
B20W2651
PRODUCT NAME
PROMAR® 200 Zero VOC Interior Latex Eg-Shel, Extra White
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
13	**471-34-1**	**Calcium Carbonate**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	15 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	
15	**13463-67-7**	**Titanium Dioxide**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	1*
Flammability	0
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	Not Applicable	Not Applicable	Not Applicable

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Required for long or repeated contact.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	10.84 lb/gal	1298 g/l
SPECIFIC GRAVITY	1.30	
BOILING POINT	212 - 213 °F	100 - 100 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	58%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	9.3	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.00 lb/gal	0 g/l	Less Water and Federally Exempt Solvents
0.00 lb/gal	0 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable
CONDITIONS TO AVOID
None known.
INCOMPATIBILITY
None known.
HAZARDOUS DECOMPOSITION PRODUCTS
By fire: Carbon Dioxide, Carbon Monoxide
HAZARDOUS POLYMERIZATION
Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS
IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."
TOXICOLOGY DATA

CAS No.	Ingredient Name				
471-34-1	**Calcium Carbonate**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
13463-67-7	**Titanium Dioxide**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION
No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD
Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.
US Ground (DOT)
Not Regulated for Transportation.
Canada (TDG)
Not Regulated for Transportation.
IMO
Not Regulated for Transportation.
IATA/ICAO
Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element

No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.
CALIFORNIA PROPOSITION 65
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
TSCA CERTIFICATION
All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

B20W2653
17 00

DATE OF PREPARATION
Mar 26, 2014

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
B20W2653
PRODUCT NAME
PROMAR® 200 Zero VOC Interior Latex Eg-Shel, Deep Base
MANUFACTURER'S NAME
Manufactured by:
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115
Distributed by:
SHERWIN-WILLIAMS CANADA INC.
170 Brunel Rd
Mississauga, ON L4Z 1T5

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
18	**1317-65-3**	**Calcium Carbonate**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	
4	**13463-67-7**	**Titanium Dioxide**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	1*
Flammability	0
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	Not Applicable	Not Applicable	Not Applicable

EXTINGUISHING MEDIA
Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS
Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES
Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY
Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE
Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE
Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.
This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).
Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

VENTILATION
Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION
If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.
When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES
Required for long or repeated contact.

EYE PROTECTION
Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	10.15 lb/gal	1216 g/l
SPECIFIC GRAVITY	1.22	
BOILING POINT	212 - 213 °F	100 - 100 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	64%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	9.5	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.00 lb/gal	0 g/l	Less Water and Federally Exempt Solvents
0.00 lb/gal	0 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

TOXICOLOGY DATA

CAS No.	Ingredient Name				
1317-65-3	**Calcium Carbonate**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
13463-67-7	**Titanium Dioxide**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

Not Regulated for Transportation.

Canada (TDG)

Not Regulated for Transportation.

IMO

Not Regulated for Transportation.

IATA/ICAO

Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element

No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

Search over 350,000 MSDS's
to get the MSDS you need FAST!

Material Safety Data Sheet

SECTION I - Material Identity
SECTION II - Manufacturer's Information
SECTION III - Physical/Chemical Characteristics
SECTION IV - Fire and Explosion Hazard Data
SECTION V - Reactivity Data
SECTION VI - Health Hazard Data
SECTION VII - Precautions for Safe Handling and Use
SECTION VIII - Control Measures
SECTION IX - Label Data
SECTION X - Transportation Data
SECTION XI - Site Specific/Reporting Information
SECTION XII - Ingredients/Identity Information

SECTION I - Material Identity

Item Name	
Part Number/Trade Name	B30B400 PROMAR 400/INTERIOR LATEX FLAT PAINT BLACK
National Stock Number	8010007512610
CAGE Code	54636
Part Number Indicator	A
MSDS Number	194181
HAZ Code	B

SECTION II - Manufacturer's Information

Manufacturer Name	SHERWIN & WILLIAMS
Street	101 SUSPECT AVE
City	CLEVELAND
State	OH
Emergency Phone	1-(216)566-2917
Information Phone	216-566-2902

MSDS Preparer's Information

Date MSDS Prepared/Revised	11FEB04
Active Indicator	Y

Alternate Vendors

SECTION III - Physical/Chemical Characteristics

Specification Number	NR
Appearance/Odor	BLACK LATEX PAINT
Boiling Point	212-448 F
Specific Gravity	1.16
Percent Volatiles by Volume	81
Container Pressure Code	1
Temperature Code	4
Product State Code	L

SECTION IV - Fire and Explosion Hazard Data

Flash Point	199
Flash Point Method	UNK

SECTION V - Reactivity Data

Stability	YES
Stability Conditions to Avoid	NR
Materials to Avoid	NR
Hazardous Decomposition Products	CARBON MONOXIDE AND DIOXIDE
LD50 - LD50 Mixture	NR

SECTION VI - Health Hazard Data

Route of Entry: Skin	YES
Route of Entry: Inhalation	YES
Health Hazards - Acute and Chronic	EXPOSURE MAY BE BY INHALATION, SKIN, OR EYE CONTACT, DEPENDING ON CONDITIONS OF USE. TO MAINTAIN EXPOSURE, FOLLOW RECOMENDATIONSFOR PROPER USE. IRRITATION TO EYES, SKIN, AND UPPER RESPIRATORY SYSTEM. IN A CONFINED AREA VAPORS IN HIGH CONCENTRATION MAY CAU
Carcinogenity: NTP	NR
Carcinogenity: IARC	NR

Carcinogenity: OSHA	NR
Symptoms of Overexposure	REDNESS AND ITCHING OR BURNING SENSATION MAY INDICATE EYE OR EXCESSIVE SKIN EXPOSURE
Medical Cond. Aggrevated by Exposure	EYES: FLUSH WITH WATER FOR 15 MIN. SKIN: WASH WITH SOAP AND WATER. INHALATION: REMOVE TO FRESH AIR. INGESTION: DO NOT INDUCE VOMITING. IF SYMPTOMS PERSIST, CONTACT A PHYSCIAN IMMEDIATELY

SECTION VII - Precautions for Safe Handling and Use

SECTION VIII - Control Measures

Respiratory Protection	USE PROPER RESPIRATORY PROTECTION
Ventilation	USE ADEQUATE VENTILATION
Protective Gloves	RECOMMENDED
Eye Protection	RECOMMENDED
Supplemental Health/Safety Data	KEEP CONTAINER CLOSED WHEN NOT IN USE. TRANSFER ONLY TO APPROVEDCONTAINERS WITH COMPLETE AND APPROPRIATE LABELING. DO NOT TAKE INTERNALLY. KEEP AWAY FROM CHILDREN

SECTION IX - Label Data

Protect Eye	YES
Protect Skin	YES
Protect Respiratory	NO
Chronic Indicator	NO
Contact Code	UNKNOWN
Fire Code	UNKNOWN
Health Code	UNKNOWN
React Code	UNKNOWN

SECTION X - Transportation Data

Container Quantity	3
Unit of Measure	GL

SECTION XI - Site Specific/Reporting Information

Volatile Organic Compounds (P/G)	.4089
Volatile Organic Compounds (G/L)	49.0021

SECTION XII - Ingredients/Identity Information

Ingredient #	01
Ingredient Name	QUARTZ
CAS Number	14808607
Percent	5
Ingredient #	02
Ingredient Name	CALCIUM CARBONATE
CAS Number	471341
Percent	13
Ingredient #	03
Ingredient Name	CARBON BLACK
CAS Number	1333864
Percent	2

MATERIAL SAFETY DATA SHEET

B31W2251
12 00

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

B31W2251

HMIS CODES

Health	2*
Flammability	0
Reactivity	0

PRODUCT NAME
PROMAR* 200 Interior Latex Semi-Gloss Enamel, Extra White

MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

EMERGENCY TELEPHONE NO.
(216) 566-2917

DATE OF PREPARATION
03-JUL-07

INFORMATION TELEPHONE NO.
(216) 566-2902

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT		UNITS	VAPOR PRESSURE
1	112-34-5	2-(2-Butoxyethoxy)-ethanol			
		ACGIH TLV	Not Available		0.06 mm
		OSHA PEL	Not Available		
2	107-21-1	Ethylene Glycol			
		ACGIH TLV	100	mg/m3 CEILI (aerosol)	0.12 mm
		OSHA PEL	50	ppm CEILING	
0.9	14464-46-1	Cristobalite			
		ACGIH TLV	0.05	mg/m3 as Resp. Dust	
		OSHA PEL	0.05	mg/m3 as Resp. Dust	
4	471-34-1	Calcium Carbonate			
		ACGIH TLV	10	mg/m3 as Dust	
		OSHA PEL	15	mg/m3 Total Dust	
		OSHA PEL	5	mg/m3 Respirable Fraction	
13	13463-67-7	Titanium Dioxide			
		ACGIH TLV	10	mg/m3 as Dust	
		OSHA PEL	10	mg/m3 Total Dust	
		OSHA PEL	5	mg/m3 Respirable Fraction	

Section 3 -- HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.
In a confined area vapors in high concentration may cause headache, nausea or dizziness.

SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.

Continued on page 2

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

Section 4 -- FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water. Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

Section 5 -- FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL
Not Applicable	N.A.	N.A.

FLAMMABILITY CLASSIFICATION
Not Applicable
EXTINGUISHING MEDIA
Carbon Dioxide, Dry Chemical, Alcohol Foam
UNUSUAL FIRE AND EXPLOSION HAZARDS
Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.
SPECIAL FIRE FIGHTING PROCEDURES
Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

Section 6 -- ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

Section 7 -- HANDLING AND STORAGE

STORAGE CATEGORY
Not Applicable
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE
Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

Continued on page 3

Section 8 -- EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	10.08 lb/gal	1208 g/l
SPECIFIC GRAVITY	1.21	
BOILING POINT	212 - 500 F	100 - 260 C
MELTING POINT	Not Available	
VOLATILE VOLUME	63 %	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	9.0	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

1.12 lb/gal	134 g/l	Less Water and Federally Exempt Solvents
0.47 lb/gal	56 g/l	Emitted VOC

Continued on page 4

Section 10 -- STABILITY AND REACTIVITY

STABILITY -- Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

Section 11 -- TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.

Ethylene Glycol is considered an animal teratogen. It has been shown to cause birth defects in rats and mice at high doses when given in drinking water or by gavage. There is no evidence to indicate it causes birth defects in humans.

Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver and urinary systems.

Rats exposed to titanium dioxide dust at 250 mg./m3 developed lung cancer, however, such exposure levels are not attainable in the workplace.

TOXICOLOGY DATA

CAS No.	Ingredient Name				
112-34-5	2-(2-Butoxyethoxy)-ethanol				
		LC50	RAT	4HR	Not Available
		LD50	RAT		5660 mg/kg
107-21-1	Ethylene Glycol				
		LC50	RAT	4HR	Not Available
		LD50	RAT		4700 mg/kg
14464-46-1	Cristobalite				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
471-34-1	Calcium Carbonate				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
13463-67-7	Titanium Dioxide				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

Section 12 -- ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

Continued on page 5

Section 13 -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

Section 14 -- TRANSPORT INFORMATION

US Ground (DOT)

Not Regulated for Transportation.

Canada (TDG)

Not Regulated for Transportation.

IMO

Not Regulated for Transportation.

Section 15 -- REGULATORY INFORMATION

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
107-21-1	Ethylene Glycol	2	
	Glycol Ethers	1	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

Section 16 -- OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

B31W4453
17 00

DATE OF PREPARATION
Feb 19, 2014

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
B31W4453
PRODUCT NAME
PROMAR® 400 Interior Latex Semi-Gloss Enamel, Deep Base
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units		Vapor Pressure
1	**112-34-5**	**2-(2-Butoxyethoxy)-ethanol**			
		ACGIH TLV	Not Available		0.06 mm
		OSHA PEL	Not Available		
1	**107-21-1**	**Ethylene Glycol**			
		ACGIH TLV	100	MG/M3 CEILING (aerosol)	0.12 mm
		OSHA PEL	50	PPM CEILING	
0.1	**14464-46-1**	**Cristobalite**			
		ACGIH TLV	0.025	mg/m3 as Resp. Dust	
		OSHA PEL	0.05	mg/m3 as Resp. Dust	
7	**1317-65-3**	**Calcium Carbonate**			
		ACGIH TLV	10	mg/m3 as Dust	
		OSHA PEL	10	mg/m3 Total Dust	
		OSHA PEL	5	mg/m3 Respirable Fraction	
5	**13463-67-7**	**Titanium Dioxide**			
		ACGIH TLV	10	mg/m3 as Dust	
		OSHA PEL	10	mg/m3 Total Dust	
		OSHA PEL	5	mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	2*
Flammability	0
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.
Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:
- the liver
- the urinary system

SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	Not Applicable	Not Applicable	Not Applicable

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	9.48 lb/gal	1135 g/l
SPECIFIC GRAVITY	1.14	
BOILING POINT	212 - 448 °F	100 - 231 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	66%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	9.5	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.77 lb/gal	92 g/l	Less Water and Federally Exempt Solvents
0.28 lb/gal	33 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

Ethylene Glycol is considered an animal teratogen. It has been shown to cause birth defects in rats and mice at high doses when given in drinking water or by gavage. There is no evidence to indicate it causes birth defects in humans.

TOXICOLOGY DATA

CAS No.	Ingredient Name				
112-34-5	**2-(2-Butoxyethoxy)-ethanol**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		5660 mg/kg
107-21-1	**Ethylene Glycol**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		4700 mg/kg
14464-46-1	**Cristobalite**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
1317-65-3	**Calcium Carbonate**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
13463-67-7	**Titanium Dioxide**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

Not Regulated for Transportation.

Canada (TDG)

Not Regulated for Transportation.

IMO

Not Regulated for Transportation.

IATA/ICAO

Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
107-21-1	Ethylene Glycol	1	
	Glycol Ethers	1	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

B42W181
03 00

DATE OF PREPARATION
Aug 20, 2013

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
B42W181
PRODUCT NAME
PRO INDUSTRIAL™ Waterborne Acrylic Dryfall - Flat, White
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 524-5979 www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
0.2	**14808-60-7**	**Quartz**		
		ACGIH TLV	0.025 mg/m3 as Resp. Dust	
		OSHA PEL	0.1 mg/m3 as Resp. Dust	
2	**14464-46-1**	**Cristobalite**		
		ACGIH TLV	0.025 mg/m3 as Resp. Dust	
		OSHA PEL	0.05 mg/m3 as Resp. Dust	
18	**1332-58-7**	**Kaolin**		
		ACGIH TLV	2 mg/m3 as Resp. Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	
8	**471-34-1**	**Calcium Carbonate**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	15 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	
11	**13463-67-7**	**Titanium Dioxide**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	1*
Flammability	0
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	Not Applicable	Not Applicable	Not Applicable

EXTINGUISHING MEDIA
Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS
Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES
Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY
Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE
Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE
Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.
This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

VENTILATION
Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION
If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.
When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES
Required for long or repeated contact.

EYE PROTECTION
Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	11.31 lb/gal	1355 g/l
SPECIFIC GRAVITY	1.36	
BOILING POINT	212 - 213 °F	100 - 100 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	75%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	9.3	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.35 lb/gal	42 g/l	Less Water and Federally Exempt Solvents
0.09 lb/gal	11 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

TOXICOLOGY DATA

CAS No.	Ingredient Name				
14808-60-7	**Quartz**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
14464-46-1	**Cristobalite**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
1332-58-7	**Kaolin**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
471-34-1	**Calcium Carbonate**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
13463-67-7	**Titanium Dioxide**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

Not Regulated for Transportation.

Canada (TDG)

Not Regulated for Transportation.

IMO

Not Regulated for Transportation.

IATA/ICAO

Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element

No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

B51W450
14 00

DATE OF PREPARATION
Mar 23, 2014

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
B51W450
PRODUCT NAME
Multi-Purpose Interior/Exterior Latex Primer, White
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient		Units	Vapor Pressure
6	**14807-96-6**	**Talc**			
			ACGIH TLV	2 mg/m3 as Resp. Dust	
			OSHA PEL	2 mg/m3 as Resp. Dust	
15	**13463-67-7**	**Titanium Dioxide**			
			ACGIH TLV	10 mg/m3 as Dust	
			OSHA PEL	10 mg/m3 Total Dust	
			OSHA PEL	5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	1*
Flammability	0
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	Not Applicable	Not Applicable	Not Applicable

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Required for long or repeated contact.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	10.89 lb/gal	1304 g/l
SPECIFIC GRAVITY	1.31	
BOILING POINT	212 - 213 °F	100 - 100 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	63%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	8.8	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.00 lb/gal	0 g/l	Less Water and Federally Exempt Solvents
0.00 lb/gal	0 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable
CONDITIONS TO AVOID
None known.
INCOMPATIBILITY
None known.
HAZARDOUS DECOMPOSITION PRODUCTS
By fire: Carbon Dioxide, Carbon Monoxide
HAZARDOUS POLYMERIZATION
Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS
IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."
TOXICOLOGY DATA

CAS No.	Ingredient Name				
14807-96-6	**Talc**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
13463-67-7	**Titanium Dioxide**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION
No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD
Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.
US Ground (DOT)
Not Regulated for Transportation.
Canada (TDG)
Not Regulated for Transportation.
IMO
Not Regulated for Transportation.
IATA/ICAO
Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element

No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.
CALIFORNIA PROPOSITION 65
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
TSCA CERTIFICATION
All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

B51W620
13 00

DATE OF PREPARATION
Dec 12, 2013

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
B51W620
PRODUCT NAME
PrepRite® ProBlock® Interior/Exterior Latex Primer/Sealer, White
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
6	**14807-96-6**	**Talc**		
		ACGIH TLV	2 mg/m3 as Resp. Dust	
		OSHA PEL	2 mg/m3 as Resp. Dust	
15	**13463-67-7**	**Titanium Dioxide**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	1*
Flammability	0
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	Not Applicable	Not Applicable	Not Applicable

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Required for long or repeated contact.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	10.89 lb/gal	1304 g/l
SPECIFIC GRAVITY	1.31	
BOILING POINT	212 - 213 °F	100 - 100 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	63%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	8.8	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.00 lb/gal	0 g/l	Less Water and Federally Exempt Solvents
0.00 lb/gal	0 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable
CONDITIONS TO AVOID
None known.
INCOMPATIBILITY
None known.
HAZARDOUS DECOMPOSITION PRODUCTS
By fire: Carbon Dioxide, Carbon Monoxide
HAZARDOUS POLYMERIZATION
Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS
IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."
TOXICOLOGY DATA

CAS No.	Ingredient Name				
14807-96-6	**Talc**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
13463-67-7	**Titanium Dioxide**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION
No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD
Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.
US Ground (DOT)
Not Regulated for Transportation.
Canada (TDG)
Not Regulated for Transportation.
IMO
Not Regulated for Transportation.
IATA/ICAO
Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element

No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.
CALIFORNIA PROPOSITION 65
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
TSCA CERTIFICATION
All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

B51W8050
14 00

DATE OF PREPARATION
Mar 8, 2014

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
B51W8050
PRODUCT NAME
Adhesion Primer, Interior/Exterior Latex, White
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
9	**14808-60-7**	**Quartz**		
		ACGIH TLV	0.025 mg/m3 as Resp. Dust	
		OSHA PEL	0.1 mg/m3 as Resp. Dust	
4	**12001-26-2**	**Mica**		
		ACGIH TLV	3 mg/m3 as Resp. Dust	
		OSHA PEL	3 mg/m3 as Resp. Dust	
9	**13463-67-7**	**Titanium Dioxide**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	1*
Flammability	0
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.
SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	Not Applicable	Not Applicable	Not Applicable

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	11.06 lb/gal	1325 g/l
SPECIFIC GRAVITY	1.33	
BOILING POINT	212 - 213 °F	100 - 100 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	57%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	9.3	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.37 lb/gal	45 g/l	Less Water and Federally Exempt Solvents
0.16 lb/gal	20 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

TOXICOLOGY DATA

CAS No.	Ingredient Name				
14808-60-7	**Quartz**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
12001-26-2	**Mica**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
13463-67-7	**Titanium Dioxide**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

Not Regulated for Transportation.

Canada (TDG)

Not Regulated for Transportation.

IMO

Not Regulated for Transportation.

IATA/ICAO

Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element

No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

B54TZ404
06 00

DATE OF PREPARATION
Mar 10, 2009

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
B54TZ404
PRODUCT NAME
Industrial Enamel HS, Ultradeep Base
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
16	**64742-88-7**	**Mineral Spirits**		
		ACGIH TLV	100 PPM	2 mm
		OSHA PEL	100 PPM	
6	**64742-88-7**	**Mineral Spirits 140-Flash**		
		ACGIH TLV	100 PPM	0.5 mm
		OSHA PEL	100 PPM	
0.3	**100-41-4**	**Ethylbenzene**		
		ACGIH TLV	100 PPM	7.1 mm
		ACGIH TLV	125 PPM STEL	
		OSHA PEL	100 PPM	
		OSHA PEL	125 PPM STEL	
2	**1330-20-7**	**Xylene**		
		ACGIH TLV	100 PPM	5.9 mm
		ACGIH TLV	150 PPM STEL	
		OSHA PEL	100 PPM	
		OSHA PEL	150 PPM STEL	
4	**111-76-2**	**2-Butoxyethanol**		
		ACGIH TLV	20 PPM	0.88 mm
		OSHA PEL	25 PPM	
0.1	**14808-60-7**	**Quartz**		
		ACGIH TLV	0.025 mg/m3 as Resp. Dust	
		OSHA PEL	0.1 mg/m3 as Resp. Dust	
10	**14807-96-6**	**Talc**		
		ACGIH TLV	2 mg/m3 as Resp. Dust	
		OSHA PEL	2 mg/m3 as Resp. Dust	

SECTION 3 — HAZARDS IDENTIFICATION

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.

HMIS Codes

Health	2*
Flammability	2
Reactivity	0

EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver, urinary, blood forming and reproductive systems.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.
Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
100 °F PMCC	0.9	10.6	Combustible, Flash above 99 and below 200 °F

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.
Application to hot surfaces requires special precautions.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

- Remove all sources of ignition. Ventilate the area.
- Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

DOL Storage Class II

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are COMBUSTIBLE. Keep away from heat and open flame.
Consult NFPA Code. Use approved Bonding and Grounding procedures.
Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.
This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.
When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES
Wear gloves which are recommended by glove supplier for protection against materials in Section 2.
EYE PROTECTION
Wear safety spectacles with unperforated sideshields.
OTHER PRECAUTIONS
Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	9.16 lb/gal	1098 g/l
SPECIFIC GRAVITY	1.10	
BOILING POINT	281 - 416 °F	138 - 213 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	39%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

2.63lb/gal	316g/l	Less Water and Federally Exempt Solvents
2.63lb/gal	315g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable
CONDITIONS TO AVOID
None known.
INCOMPATIBILITY
None known.
HAZARDOUS DECOMPOSITION PRODUCTS
By fire: Carbon Dioxide, Carbon Monoxide
HAZARDOUS POLYMERIZATION
Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS
Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.
Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations. There is no evidence that ethylbenzene causes cancer in humans.
Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.
TOXICOLOGY DATA

CAS No.	Ingredient Name				
64742-88-7	**Mineral Spirits**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
64742-88-7	**Mineral Spirits 140-Flash**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
100-41-4	**Ethylbenzene**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		3500 mg/kg
1330-20-7	**Xylene**				
		LC50	RAT	4HR	5000 ppm
		LD50	RAT		4300 mg/kg
111-76-2	**2-Butoxyethanol**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		470 mg/kg
14808-60-7	**Quartz**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
14807-96-6	**Talc**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.
Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

US Ground (DOT)

May be Classed as a Combustible Liquid for U.S. Ground.
UN1263, PAINT, 3, PG III, (ERG#128)

DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities

Xylenes (isomers and mixture) 100 lb RQ

Bulk Containers may be Shipped as (check reportable quantities):

UN1263, PAINT, COMBUSTIBLE LIQUID, PG III, (ERG#128)

Canada (TDG)

May be Classed as a Combustible Liquid for Canadian Ground.
UN1263, PAINT, CLASS 3, PG III, (ERG#128)

IMO

UN1263, PAINT, CLASS 3, PG III, (38 C c.c.), EmS F-E, S-E

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
100-41-4	Ethylbenzene	0.3	
1330-20-7	Xylene	2	
	Glycol Ethers	4	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

SAFETY DATA SHEET

B66A310

Section 1. Identification

Product name : PRO INDUSTRIAL™ PRO-CRYL® Universal Acrylic Primer Gray

Product code : B66A310

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY
101 PROSPECT AVENUE, NW
CLEVELAND, OHIO 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : (800) 524-5979

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : CARCINOGENICITY - Category 2

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 9.8%

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : Suspected of causing cancer.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing.

Response : IF exposed or concerned: Get medical attention.

Storage : Store locked up.

Disposal Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY.

Section 2. Hazards identification

Please refer to the SDS for additional information. Do not transfer contents to other containers for storage.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Titanium Dioxide	≤10	13463-67-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Section 4. First aid measures

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Titanium Dioxide	**ACGIH TLV (United States, 3/2015).** TWA: 10 mg/m³ 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 15 mg/m³ 8 hours. Form: Total dust

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Section 8. Exposure controls/personal protection

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : 8.7

Melting point : Not available.

Boiling point : 100°C (212°F)

Flash point : Closed cup: >93.3°C (>199.9°F)

Evaporation rate : 0.09 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Lower: 0.6%
Upper: 20.4%

Vapor pressure : 0.31 kPa (2.333 mm Hg) [at 20°C]

Vapor density : 1 [Air = 1]

Relative density : 1.23

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (room temperature): >0.205 cm^2/s (>20.5 cSt)
Kinematic (40°C (104°F)): >0.07 cm^2/s (>7 cSt)

Molecular weight : Not applicable.

Aerosol product

Heat of combustion : 1.46 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Titanium Dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Titanium Dioxide	-	2B	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Titanium Dioxide	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours

Persistence and degradability

Not available.

Section 12. Ecological information

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Titanium Dioxide	-	352	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Special provisions** Not Applicable

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the

Section 14. Transport information

substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Proper shipping name : Not available.

Ship type : Not available.

Pollution category : Not available.

Section 15. Regulatory information

SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	1
Flammability		0
Physical hazards		0

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

Procedure used to derive the classification

Classification	Justification
CARCINOGENICITY - Category 2	Calculation method

History

Date of printing : 3/14/2016

Date of issue/Date of revision : 3/14/2016

Date of previous issue : 1/21/2016

Version : 2

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

Section 16. Other information

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

MATERIAL SAFETY DATA SHEET

B66T204
17 00

DATE OF PREPARATION
May 23, 2009

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
B66T204
PRODUCT NAME
DTM ACRYLIC Semi-Gloss Acrylic Coating, Ultradeep Base
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units		Vapor Pressure
5	**111-77-3**	**2-(2-Methoxyethoxy)-ethanol**			
		ACGIH TLV	Not Available		1 mm
		OSHA PEL	Not Available		
0.2	**14464-46-1**	**Cristobalite**			
		ACGIH TLV	0.025	mg/m3 as Resp. Dust	
		OSHA PEL	0.05	mg/m3 as Resp. Dust	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	2*
Flammability	0
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.
SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	N.A.	N.A.	Not Applicable

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

- Remove all sources of ignition. Ventilate the area.
- Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	8.83 lb/gal	1057 g/l
SPECIFIC GRAVITY	1.06	
BOILING POINT	212 - 500 °F	100 - 260 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	65%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	9.0	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

1.59lb/gal	191g/l	Less Water and Federally Exempt Solvents
0.68lb/gal	82g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable
CONDITIONS TO AVOID
None known.
INCOMPATIBILITY
None known.
HAZARDOUS DECOMPOSITION PRODUCTS
By fire: Carbon Dioxide, Carbon Monoxide
HAZARDOUS POLYMERIZATION
Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS
Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.
TOXICOLOGY DATA

CAS No.	Ingredient Name				
111-77-3	**2-(2-Methoxyethoxy)-ethanol**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		5500 mg/kg
14464-46-1	**Cristobalite**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION
No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD
Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

US Ground (DOT)
Not Regulated for Transportation.
Canada (TDG)
Not Regulated for Transportation.
IMO
Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
	Glycol Ethers	5	

CALIFORNIA PROPOSITION 65
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
TSCA CERTIFICATION
All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

SHERWIN-WILLIAMS CO -- B66W201 DTM ACRYLIC COATING SEMI-GLOSS/WATERBORNE/PURE WHITE -- 8010-00F053017

========== Product Identification ==========

Product ID:B66W201 DTM ACRYLIC COATING SEMI-GLOSS/WATERBORNE/PURE WHITE
MSDS Date:03/15/1996
FSC:8010
NIIN:00F053017
MSDS Number: CDQXP
=== Responsible Party ===
Company Name:SHERWIN-WILLIAMS CO
Address:101 PROSPECT AVE N W
City:CLEVELAND
State:OH
ZIP:44115-1042
Country:US
Info Phone Num:216-566-2902/216-566-2917
Emergency Phone Num:216-566-2917/216-566-2902
CAGE:54636
=== Contractor Identification ===
Company Name:SHERWIN-WILLIAMS CO THE
Address:101 PROSPECT AVE NW
Box:City:CLEVELAND
State:OH
ZIP:44115-1042
Country:US
Phone:800-251-2486/216-566-2242
CAGE:54636

========== Composition/Information on Ingredients ==========

Ingred Name:DIETHYLENE GLYCOL METHYL ETHER, 2-(2-METHOXYETHOXY) ETHANOL METHYL CARBITOL
CAS:111-77-3
RTECS #:KL6125000
Fraction by Wt: 3%

Ingred Name:ETHYLENE GLYCOL, GLYCOL *96-4*
CAS:107-21-1
RTECS #:KW2975000
Fraction by Wt: 2%
Other REC Limits:10 MG/CUM
OSHA PEL:50 PPM
ACGIH TLV:C 127 MG/CUM
EPA Rpt Qty:1 LB
DOT Rpt Qty:1 LB

Ingred Name:OXO-TRIDECYL ACETATE
CAS:108419-35-8
Fraction by Wt: 2%

Ingred Name:SILICA CRYSTALLINE, SILICA (CRISTOBALITE) (SUSPECTED HUMAN CARCINOGEN BY IARC, SUSP CARC BY NTP; IARC GROUP 2A) *96-4*
CAS:14464-46-1
RTECS #:VV7325000
Fraction by Wt: 0.1%
Other REC Limits:0.05 MG/CUM NIOSH
ACGIH TLV:0.05 MG/CUM

Ingred Name:TITANIUM DIOXIDE, TITANIUM OXIDE (SUSPECTED ANIMAL CARCINOGEN, IARC GROUP 3) *96-4*
CAS:13463-67-7
RTECS #:XR2275000
Fraction by Wt: 17%
OSHA PEL:15 MG/CUM
ACGIH TLV:10 MG/CUM (DUST)

Hazards Identification

Routes of Entry: Inhalation:YES Skin:NO Ingestion:NO
Reports of Carcinogenicity:NTP:YES IARC:YES OSHA:NO
Health Hazards Acute and Chronic:INHALATION: IRRITATION TO UPPER RESPIRATORY SYSTEM. EYES/SKIN: IRRITATION & BURNING. CRYSTALLINE SILICA MAY CAUSE LUNG DAMAGE (SILICOSIS) & POSSIBLE CANCER. PROLONGED OVEREXPOSURE TO SOLVENTS MAY CAUS E ADVERSE EFFECTS TO THE LIVER & URINARY SYSTEMS.
Explanation of Carcinogenicity:SEE INGREDIENTS.
Effects of Overexposure:IRRITATION, HEADACHE, NAUSEA, DIZZINESS, REDNESS, ITCHING, BURNING SENSATION.
Medical Cond Aggravated by Exposure:NONE

First Aid Measures

First Aid:INHALATION: REMOVE TO FRESH AIR. RESTORE BREATHING. KEEP WARM & QUIET. SKIN: WASH THOROUGHLY W/SOAP & WATER. EYES: FLUSH W/LARGE AMOUNTS OF WATER FOR 15 MINS. OBTAIN MEDICAL ATTENTION IN ALL CASES.

Fire Fighting Measures

Extinguishing Media:CO2, DRY CHEMICAL, ALCOHOL FOAM.
Fire Fighting Procedures:USE FULL PROTECTIVE EQUIPMENT & SCBA. WATER SPRAY MAY BE INEFFECTIVE. IF WATER IS USED, FOG NOZZLES ARE PREFERABLE. USE WATER TO COOL CLOSED CONTAINERS.
Unusual Fire/Explosion Hazard:CLOSED CONTAINERS MAY EXPLODE DUE TO THE BUILD UP OF PRESSURE WHEN EXPOSED TO EXTREME HEAT.

Accidental Release Measures

Spill Release Procedures:REMOVE SOURCES OF IGNITION. VENTILATE & REMOVE W/INERT ABSORBENT.

Handling and Storage

Handling and Storage Precautions:KEEP CONTAINER CLOSED WHEN NOT IN USE. TRANSFER ONLY TO APPROVED CONTAINERS W/COMPLETE & APPROPRIATE LABELING. USE ONLY W/ADEQUATE VENTILATION.
Other Precautions:KEEP OUT OF REACH OF CHILDREN. DON'T TAKE INTERNALLY. AVOID BREATHING VAPOR & SPRAY MIST. AVOID CONTACT W/SKIN & EYES.

Exposure Controls/Personal Protection

Respiratory Protection:IF EXPOSURE CAN'T BE CONTROLLED BELOW APPLICABLE LIMITS, WEAR A PROPERLY FITTED ORGANIC VAPOR/PARTICULATE RESPIRATOR APPROVED BY NIOSH/MSHA. WHEN SANDING/ABRAIDING THE DRIED FILM, WEAR A DUST/MIST RES PIRATOR APPROVED BY NIOSH/MSHA.
Ventilation:LOCAL EXHAUST PREFERABLE. MECHANICAL (GENERAL) EXHAUST ACCEPTABLE TO MAINTAIN BELOW APPLICABLE EXPOSURE LIMITS.

Protective Gloves:RECOMMENDED
Eye Protection:SAFETY GLASSES W/UNPERFORATED SIDESHIELD
Other Protective Equipment:PERSONAL PROTECTIVE EQUIPMENT TO MINIMIZE EXPOSURE.
Work Hygienic Practices:REMOVE/LAUNDER CONTAMINATED CLOTHING BEFORE REUSE. WASH HANDS AFTER USING.
Supplemental Safety and Health
VAPOR PRESSURE IS FOR 2-(2-METHOXYETHOXY)-ETHANOL.

Physical/Chemical Properties

Boiling Pt:B.P. Text:212-545F
Vapor Pres:1
Vapor Density:>1
Spec Gravity:1.23
pH:9.5
VOC Grams/Liter:1.68
Evaporation Rate & Reference:SLOWER THAN ETHER
Percent Volatiles by Volume:61

Stability and Reactivity Data

Stability Indicator/Materials to Avoid:YES
Hazardous Decomposition Products:BY FIRE: CO2, CO.

Disposal Considerations

Waste Disposal Methods:INCINERATE/DISPOSE OF IN AN APPROVED FACILITY, IAW/FEDERAL, STATE & LOCAL REGULATIONS. DON'T INCINERATE CLOSED CONTAINERS.

Other Information

Disclaimer (provided with this information by the compiling agencies): This information is formulated for use by elements of the Department of Defense. The United States of America in no manner whatsoever, expressly or implied, warrants this information to be accurate and disclaims all liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.

MATERIAL SAFETY DATA SHEET

B66W211
19 00

DATE OF PREPARATION
May 23, 2009

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
B66W211
PRODUCT NAME
DTM ACRYLIC Semi-Gloss Acrylic Coating, Extra White
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units		Vapor Pressure
4	**111-77-3**	**2-(2-Methoxyethoxy)-ethanol**			
		ACGIH TLV	Not Available		1 mm
		OSHA PEL	Not Available		
0.1	**14464-46-1**	**Cristobalite**			
		ACGIH TLV	0.025	mg/m3 as Resp. Dust	
		OSHA PEL	0.05	mg/m3 as Resp. Dust	
16	**13463-67-7**	**Titanium Dioxide**			
		ACGIH TLV	10	mg/m3 as Dust	
		OSHA PEL	10	mg/m3 Total Dust	
		OSHA PEL	5	mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	2*
Flammability	0
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.
SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	N.A.	N.A.	Not Applicable

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

- Remove all sources of ignition. Ventilate the area.
- Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	10.03 lb/gal	1201 g/l
SPECIFIC GRAVITY	1.21	
BOILING POINT	212 - 500 °F	100 - 260 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	62%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	9.5	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

1.44lb/gal	172g/l	Less Water and Federally Exempt Solvents
0.66lb/gal	79g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable
CONDITIONS TO AVOID
None known.
INCOMPATIBILITY
None known.
HAZARDOUS DECOMPOSITION PRODUCTS
By fire: Carbon Dioxide, Carbon Monoxide
HAZARDOUS POLYMERIZATION
Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS
Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.
IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."
TOXICOLOGY DATA

CAS No.	Ingredient Name				
111-77-3	**2-(2-Methoxyethoxy)-ethanol**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		5500 mg/kg
14464-46-1	**Cristobalite**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
13463-67-7	**Titanium Dioxide**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION
No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD
Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

US Ground (DOT)
Not Regulated for Transportation.
Canada (TDG)
Not Regulated for Transportation.
IMO
Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
	Glycol Ethers	4	

CALIFORNIA PROPOSITION 65
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
TSCA CERTIFICATION
All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

B66W213
07 00

DATE OF PREPARATION
May 23, 2009

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
B66W213
PRODUCT NAME
DTM ACRYLIC Semi-Gloss Acrylic Coating, Deep Base
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units		Vapor Pressure
4	**111-77-3**	**2-(2-Methoxyethoxy)-ethanol**			
		ACGIH TLV	Not Available		1 mm
		OSHA PEL	Not Available		
0.2	**14464-46-1**	**Cristobalite**			
		ACGIH TLV	0.025	mg/m3 as Resp. Dust	
		OSHA PEL	0.05	mg/m3 as Resp. Dust	
6	**13463-67-7**	**Titanium Dioxide**			
		ACGIH TLV	10	mg/m3 as Dust	
		OSHA PEL	10	mg/m3 Total Dust	
		OSHA PEL	5	mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	2*
Flammability	0
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.
SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	N.A.	N.A.	Not Applicable

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

- Remove all sources of ignition. Ventilate the area.
- Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	9.27 lb/gal	1111 g/l
SPECIFIC GRAVITY	1.12	
BOILING POINT	212 - 500 °F	100 - 260 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	64%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	9.0	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

1.67lb/gal	200g/l	Less Water and Federally Exempt Solvents
0.74lb/gal	89g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable
CONDITIONS TO AVOID
None known.
INCOMPATIBILITY
None known.
HAZARDOUS DECOMPOSITION PRODUCTS
By fire: Carbon Dioxide, Carbon Monoxide
HAZARDOUS POLYMERIZATION
Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS
Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.
IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."
TOXICOLOGY DATA

CAS No.	Ingredient Name				
111-77-3	**2-(2-Methoxyethoxy)-ethanol**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		5500 mg/kg
14464-46-1	**Cristobalite**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
13463-67-7	**Titanium Dioxide**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION
No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD
Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

US Ground (DOT)
Not Regulated for Transportation.
Canada (TDG)
Not Regulated for Transportation.
IMO
Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
	Glycol Ethers	4	

CALIFORNIA PROPOSITION 65
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
TSCA CERTIFICATION
All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

SAFETY DATA SHEET

B67C2000

Section 1. Identification

Product name : ARMORSEAL® 1000 HS Epoxy (Part A)
Clear

Product code : B67C2000

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY
101 PROSPECT AVENUE, NW
CLEVELAND, OHIO 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : (800) 524-5979

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 3
SKIN CORROSION/IRRITATION - Category 1
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 2
TOXIC TO REPRODUCTION (Unborn child) - Category 1B
TOXIC TO REPRODUCTION (Fertility) - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 16.5%

GHS label elements

Hazard pictograms :

Signal word : Danger

Section 2. Hazards identification

Hazard statements : Flammable liquid and vapor.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
May damage the unborn child.
Suspected of damaging fertility.
Suspected of causing cancer.
May be fatal if swallowed and enters airways.
May cause respiratory irritation.
May cause drowsiness and dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

Response : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Storage : Store locked up. Store in a well-ventilated place. Keep cool.

Disposal Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY. This product must be mixed with other components before use. Before opening the packages, READ AND FOLLOW WARNING LABELS ON ALL COMPONENTS.

Please refer to the SDS for additional information. Do not transfer contents to other containers for storage.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Section 3. Composition/information on ingredients

Ingredient name	% by weight	CAS number
Phenylmethanol	≥10 - <22	100-51-6
4-Nonylphenol	≥10 - <16	84852-15-3
Xylene	≥10 - <13	1330-20-7
Light Aromatic Hydrocarbons	≥5 - <10	64742-95-6
Methylenedicyclohexylamine	≥5 - <10	1761-71-3
1,2,4-Trimethylbenzene	≥5 - <8	95-63-6
Butyl Benzyl Phthalate	≥3 - <5	85-68-7
Ethylbenzene	≥1 - <2.2	100-41-4
1,3,5-Trimethylbenzene	≥1 - <2.2	108-67-8
Tri(dimethylaminomethyl)phenol	≥1 - <2.2	90-72-2
n-Aminoethyl Piperazine	≥1 - <3	140-31-8
Cumene	≥1 - <1.1	98-82-8
Dipentene	≥0.1 - <0.3	138-86-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Inhalation : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage.

Section 4. First aid measures

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.

Skin contact : Causes severe burns. May cause an allergic skin reaction.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
stomach pains
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Section 5. Fire-fighting measures

Specific hazards arising from the chemical : Flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Phenylmethanol	**AIHA WEEL (United States, 10/2011).** TWA: 10 ppm 8 hours.
4-Nonylphenol	None.
Xylene	**ACGIH TLV (United States, 3/2015).** TWA: 100 ppm 8 hours. TWA: 434 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 651 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.
Light Aromatic Hydrocarbons	None.
Methylenedicyclohexylamine	None.
1,2,4-Trimethylbenzene	**ACGIH TLV (United States, 3/2015).** TWA: 25 ppm 8 hours. TWA: 123 mg/m³ 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 25 ppm 10 hours. TWA: 125 mg/m³ 10 hours.
Butyl Benzyl Phthalate	None.
Ethylbenzene	**ACGIH TLV (United States, 3/2015).** TWA: 20 ppm 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 100 ppm 10 hours.

	TWA: 435 mg/m³ 10 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.
1,3,5-Trimethylbenzene	**ACGIH TLV (United States, 3/2015).** TWA: 25 ppm 8 hours. TWA: 123 mg/m³ 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 25 ppm 10 hours. TWA: 125 mg/m³ 10 hours.
Tri(dimethylaminomethyl)phenol	None.
n-Aminoethyl Piperazine	None.
Cumene	**ACGIH TLV (United States, 3/2015).** TWA: 50 ppm 8 hours. **NIOSH REL (United States, 10/2013).** **Absorbed through skin.** TWA: 50 ppm 10 hours. TWA: 245 mg/m³ 10 hours. **OSHA PEL (United States, 2/2013).** **Absorbed through skin.** TWA: 50 ppm 8 hours. TWA: 245 mg/m³ 8 hours.
Dipentene	**AIHA WEEL (United States, 10/2011).** TWA: 30 ppm 8 hours.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Section 8. Exposure controls/personal protection

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : 136°C (276.8°F)

Flash point : Closed cup: 40°C (104°F) [Pensky-Martens Closed Cup]

Evaporation rate : 0.8 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Lower: 0.7%
Upper: 13.1%

Vapor pressure : 0.18 kPa (1.333 mm Hg) [at 20°C]

Vapor density : 3.66 [Air = 1]

Relative density : 0.95

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (room temperature): <0.205 cm^2/s (<20.5 cSt)
Kinematic (40°C (104°F)): <0.205 cm^2/s (<20.5 cSt)

Molecular weight : Not applicable.

Aerosol product

Heat of combustion : 36.78 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Section 10. Stability and reactivity

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.

Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Phenylmethanol	LD50 Dermal	Rabbit	2000 mg/kg	-
	LD50 Oral	Rat	1230 mg/kg	-
4-Nonylphenol	LD50 Oral	Rat	1300 mg/kg	-
Xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
Light Aromatic Hydrocarbons	LD50 Oral	Rat	8400 mg/kg	-
1,2,4-Trimethylbenzene	LC50 Inhalation Vapor	Rat	18000 mg/m³	4 hours
	LD50 Oral	Rat	5 g/kg	-
Butyl Benzyl Phthalate	LD50 Dermal	Rabbit	>10000 mg/kg	-
	LD50 Dermal	Rat	6700 mg/kg	-
	LD50 Oral	Rat	2330 mg/kg	-
Ethylbenzene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
1,3,5-Trimethylbenzene	LC50 Inhalation Vapor	Rat	24000 mg/m³	4 hours
	LD50 Oral	Rat	5000 mg/kg	-
Tri(dimethylaminomethyl) phenol	LD50 Dermal	Rat	1280 mg/kg	-
	LD50 Oral	Rat	1200 mg/kg	-
Cumene	LC50 Inhalation Vapor	Rat	39000 mg/m³	4 hours
	LD50 Oral	Rat	1400 mg/kg	-
Dipentene	LD50 Oral	Rat	5300 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Phenylmethanol	Skin - Mild irritant	Man	-	48 hours 16 milligrams	-
	Skin - Moderate irritant	Pig	-	100 Percent	-
	Skin - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
4-Nonylphenol	Eyes - Severe irritant	Rabbit	-	100 milligrams	-
	Skin - Severe irritant	Rabbit	-	24 hours 500 milligrams	-
Xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	100 Percent	-
Light Aromatic Hydrocarbons	Eyes - Mild irritant	Rabbit	-	24 hours 100 microliters	-

Methylenedicyclohexylamine	Eyes - Severe irritant	Rabbit	-	24 hours 10 microliters	-
Ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-
1,3,5-Trimethylbenzene	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
Tri(dimethylaminomethyl) phenol	Eyes - Severe irritant	Rabbit	-	24 hours 50 Micrograms	-
	Skin - Mild irritant	Rat	-	0.025 Mililiters	-
	Skin - Severe irritant	Rat	-	0.25 Mililiters	-
	Skin - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
n-Aminoethyl Piperazine	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
Cumene	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	86 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 10 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
Dipentene	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Xylene	-	3	-
Butyl Benzyl Phthalate	-	3	-
Ethylbenzene	-	2B	-
Cumene	-	2B	Reasonably anticipated to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Phenylmethanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Xylene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Light Aromatic Hydrocarbons	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
1,2,4-Trimethylbenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Ethylbenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
1,3,5-Trimethylbenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Cumene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Dipentene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Phenylmethanol	Category 2	Not determined	Not determined
Xylene	Category 2	Not determined	Not determined
Light Aromatic Hydrocarbons	Category 2	Not determined	Not determined
1,2,4-Trimethylbenzene	Category 2	Not determined	Not determined
Ethylbenzene	Category 2	Not determined	Not determined
1,3,5-Trimethylbenzene	Category 2	Not determined	Not determined
Cumene	Category 2	Not determined	Not determined
Dipentene	Category 2	Not determined	Not determined

Aspiration hazard

Name	Result
Xylene	ASPIRATION HAZARD - Category 1
Light Aromatic Hydrocarbons	ASPIRATION HAZARD - Category 1
1,2,4-Trimethylbenzene	ASPIRATION HAZARD - Category 1
Ethylbenzene	ASPIRATION HAZARD - Category 1
1,3,5-Trimethylbenzene	ASPIRATION HAZARD - Category 1
Cumene	ASPIRATION HAZARD - Category 1
Dipentene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.

Skin contact : Causes severe burns. May cause an allergic skin reaction.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
stomach pains
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : May damage the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : Suspected of damaging fertility.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	2160.2 mg/kg
Dermal	6861.4 mg/kg
Inhalation (gases)	33392.4 ppm
Inhalation (vapors)	192.3 mg/l

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Phenylmethanol	Acute LC50 10000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
4-Nonylphenol	Acute EC50 0.03 mg/l Marine water	Algae - Skeletonema costatum	72 hours
	Acute EC50 0.027 mg/l Marine water	Algae - Skeletonema costatum	96 hours
	Acute EC50 137 µg/l Marine water	Crustaceans - Eohaustorius estuarius - Adult	48 hours
	Acute LC50 17 µg/l Marine water	Fish - Pleuronectes americanus - Larvae	96 hours
	Chronic EC10 0.012 mg/l Marine water	Algae - Skeletonema costatum	96 hours
	Chronic NOEC 5 µg/l Fresh water	Crustaceans - Gammarus fossarum - Adult	21 days
	Chronic NOEC 7.4 µg/l Fresh water	Fish - Pimephales promelas - Embryo	33 days
Xylene	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
1,2,4-Trimethylbenzene	Acute LC50 4910 µg/l Marine water	Crustaceans - Elasmopus pectenicrus - Adult	48 hours
	Acute LC50 7720 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Butyl Benzyl Phthalate	Acute EC50 0.22 ppm Marine water	Algae - Skeletonema costatum	72 hours
	Acute EC50 100 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 1000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 32.3 ppm Marine water	Crustaceans - Americamysis bahia	48 hours
	Acute LC50 510 µg/l Marine water	Fish - Cymatogaster aggregata - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 0.26 mg/l Fresh water	Daphnia - Daphnia magna	21 days
Ethylbenzene	Acute EC50 4600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 3600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 6530 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 2930 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
1,3,5-Trimethylbenzene	Acute LC50 13000 µg/l Marine water	Crustaceans - Cancer magister - Zoea	48 hours
	Acute LC50 12520 µg/l Fresh water	Fish - Carassius auratus	96 hours
	Chronic NOEC 400 µg/l Fresh water	Daphnia - Daphnia magna	21 days
n-Aminoethyl Piperazine	Acute LC50 2190000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Cumene	Acute EC50 2600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 7400 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 10600 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 2700 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

Section 12. Ecological information

Dipentene	Acute EC50 28.2 mg/l Fresh water Acute EC50 20.2 mg/l Fresh water Acute IC50 13.798 mg/l Fresh water	Daphnia - Daphnia magna Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling) Algae - Pseudokirchneriella subcapitata	48 hours 96 hours 96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Phenylmethanol	-	-	Readily
Xylene	-	-	Readily
Light Aromatic Hydrocarbons	-	-	Readily
Ethylbenzene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
4-Nonylphenol	-	740	high
Xylene	-	8.1 to 25.9	low
Light Aromatic Hydrocarbons	-	10 to 2500	high
1,2,4-Trimethylbenzene	-	243	low
Butyl Benzyl Phthalate	-	1693.25	high
1,3,5-Trimethylbenzene	-	161	low
Cumene	-	94.69	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

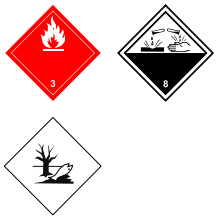
Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN2924	UN2924	UN2924	UN2924	UN2924
UN proper shipping name	FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Polyamine, Xylene)	FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Polyamine, Xylene)	FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Butyl Benzyl Phthalate, Xylene, Polyamine)	FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Butyl Benzyl Phthalate, Xylene, Polyamine)	FLAMMABLE LIQUID, CORROSIVE, N. O.S. (Polyamine, Xylene). Marine pollutant (4-Nonylphenol, 1, 3, 5-Trimethylbenzene)
Transport hazard class(es)	3 (8)	3 (8)	3 (8)	3 (8)	3 (8) 
Packing group	III	III	III	III	III
Environmental hazards	No.	No.	No.	No.	Yes.
Additional information	**Special provisions** Not Applicable **ERG No.** 132	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2. 18-2.19 (Class 3), 2.40-2.42 (Class 8). **Special provisions** Not Applicable **ERG No.** 132	**Special provisions** (ERG#132) **ERG No.** 132	The environmentally hazardous substance mark may appear if required by other transportation regulations. **Special provisions** Not Applicable	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. **Emergency schedules (EmS)** F-E, S-C

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 14. Transport information

Proper shipping name	:	Not available.
Ship type	:	Not available.
Pollution category	:	Not available.

Section 15. Regulatory information

SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	3
Flammability		2
Physical hazards		0

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

Procedure used to derive the classification

Classification	Justification
Flam. Liq. 3, H226	On basis of test data
Skin Corr. 1, H314	Calculation method
Eye Dam. 1, H318	Calculation method
Skin Sens. 1, H317	Calculation method
Carc. 2, H351	Calculation method
Repr. 1B, H360 (Unborn child)	Calculation method
Repr. 2, H361 (Fertility)	Calculation method
STOT SE 3, H335	Calculation method
STOT SE 3, H336	Calculation method
STOT RE 2, H373	Calculation method
Asp. Tox. 1, H304	Calculation method

History

Date of printing	:	11/27/2015
Date of issue/Date of revision	:	11/27/2015
Date of previous issue	:	3/24/2015
Version	:	2
Key to abbreviations	:	ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships,

Section 16. Other information

1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

SAFETY DATA SHEET

B67V2002

Section 1. Identification

Product name : ARMORSEAL® 1000 HS Epoxy (Part B)
Hardener

Product code : B67V2002

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY
101 PROSPECT AVENUE, NW
CLEVELAND, OHIO 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : (800) 524-5979

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 3
ACUTE TOXICITY (inhalation) - Category 4
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
GERM CELL MUTAGENICITY - Category 2
CARCINOGENICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 69.8%

GHS label elements

Hazard pictograms :

Signal word : Danger

Section 2. Hazards identification

Hazard statements : Flammable liquid and vapor.
Harmful if inhaled.
Causes serious eye irritation.
Causes skin irritation.
May cause an allergic skin reaction.
Suspected of causing genetic defects.
Suspected of causing cancer.
May be fatal if swallowed and enters airways.
May cause respiratory irritation.
May cause drowsiness and dizziness.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

Response : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage : Store locked up. Store in a well-ventilated place. Keep cool.

Disposal Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY. This product must be mixed with other components before use. Before opening the packages, READ AND FOLLOW WARNING LABELS ON ALL COMPONENTS.

Please refer to the SDS for additional information. Do not transfer contents to other containers for storage.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Section 3. Composition/information on ingredients

Ingredient name	% by weight	CAS number
Epoxy Polymer	≥10 - <25	25068-38-6
Xylene	≥12 - <25	1330-20-7
1,2,4-Trimethylbenzene	≥4 - <5	95-63-6
Light Aromatic Hydrocarbons	≥3 - <5	64742-95-6
Butyl Glycidyl Ether	≥1 - <3	2426-08-6
Ethylbenzene	≥2 - <3	100-41-4
1,3,5-Trimethylbenzene	≥1 - <2	108-67-8
Cumene	≥0.3 - <1	98-82-8

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation. May cause an allergic skin reaction.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

Section 4. First aid measures

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
halogenated compounds

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Epoxy Polymer	None.
Xylene	**ACGIH TLV (United States, 3/2015).** TWA: 100 ppm 8 hours. TWA: 434 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 651 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.
1,2,4-Trimethylbenzene	**ACGIH TLV (United States, 3/2015).** TWA: 25 ppm 8 hours. TWA: 123 mg/m³ 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 25 ppm 10 hours. TWA: 125 mg/m³ 10 hours.
Light Aromatic Hydrocarbons	None.
Butyl Glycidyl Ether	**ACGIH TLV (United States, 3/2015).** **Absorbed through skin. Skin sensitizer.** TWA: 3 ppm 8 hours. **NIOSH REL (United States, 10/2013).** CEIL: 5.6 ppm 15 minutes. CEIL: 30 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 50 ppm 8 hours. TWA: 270 mg/m³ 8 hours.
Ethylbenzene	**ACGIH TLV (United States, 3/2015).** TWA: 20 ppm 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 100 ppm 10 hours. TWA: 435 mg/m³ 10 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m³ 15 minutes. **OSHA PEL (United States, 2/2013).** TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.
1,3,5-Trimethylbenzene	**ACGIH TLV (United States, 3/2015).** TWA: 25 ppm 8 hours. TWA: 123 mg/m³ 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 25 ppm 10 hours. TWA: 125 mg/m³ 10 hours.
Cumene	**ACGIH TLV (United States, 3/2015).** TWA: 50 ppm 8 hours. **NIOSH REL (United States, 10/2013).** **Absorbed through skin.**

	TWA: 50 ppm 10 hours. TWA: 245 mg/m³ 10 hours. **OSHA PEL (United States, 2/2013).** **Absorbed through skin.** TWA: 50 ppm 8 hours. TWA: 245 mg/m³ 8 hours.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state	:	Liquid.
Color	:	Not available.
Odor	:	Not available.
Odor threshold	:	Not available.
pH	:	Not available.
Melting point	:	Not available.
Boiling point	:	136°C (276.8°F)
Flash point	:	Closed cup: 37°C (98.6°F) [Pensky-Martens Closed Cup]
Evaporation rate	:	0.8 (butyl acetate = 1)
Flammability (solid, gas)	:	Not available.
Lower and upper explosive (flammable) limits	:	Lower: 0.7% Upper: 7%
Vapor pressure	:	0.13 kPa (0.946 mm Hg) [at 20°C]
Vapor density	:	3.66 [Air = 1]
Relative density	:	1.06
Solubility	:	Not available.
Partition coefficient: n-octanol/water	:	Not available.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
Viscosity	:	Kinematic (room temperature): <0.07 cm^2/s (<7 cSt) Kinematic (40°C (104°F)): <0.07 cm^2/s (<7 cSt)
Molecular weight	:	Not applicable.

Aerosol product

Heat of combustion	:	0.000009623 kJ/g

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
Incompatible materials	:	Reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Xylene	LC50 Inhalation Gas.	Rat	5000 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
1,2,4-Trimethylbenzene	LC50 Inhalation Vapor	Rat	18000 mg/m³	4 hours
	LD50 Oral	Rat	5 g/kg	-
Light Aromatic Hydrocarbons	LD50 Oral	Rat	8400 mg/kg	-
Butyl Glycidyl Ether	LD50 Oral	Rat	1660 mg/kg	-
Ethylbenzene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
1,3,5-Trimethylbenzene	LC50 Inhalation Vapor	Rat	24000 mg/m³	4 hours
	LD50 Oral	Rat	5000 mg/kg	-
Cumene	LC50 Inhalation Vapor	Rat	39000 mg/m³	4 hours
	LD50 Oral	Rat	1400 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Epoxy Polymer	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 microliters	-
	Skin - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
Xylene	Eyes - Mild irritant	Rabbit	-	87 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 milligrams	-
	Skin - Mild irritant	Rat	-	8 hours 60 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	100 Percent	-
Light Aromatic Hydrocarbons	Eyes - Mild irritant	Rabbit	-	24 hours 100 microliters	-
Butyl Glycidyl Ether	Eyes - Mild irritant	Rabbit	-	91 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 750 Micrograms	-
	Skin - Mild irritant	Rabbit	-	72 hours 454 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
Ethylbenzene	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 milligrams	-
1,3,5-Trimethylbenzene	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
Cumene	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Mild irritant	Rabbit	-	86 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 10 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-

Sensitization

Section 11. Toxicological information

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Xylene	-	3	-
Ethylbenzene	-	2B	-
Cumene	-	2B	Reasonably anticipated to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Xylene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
1,2,4-Trimethylbenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Light Aromatic Hydrocarbons	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Ethylbenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
1,3,5-Trimethylbenzene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Cumene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Xylene	Category 2	Not determined	Not determined
1,2,4-Trimethylbenzene	Category 2	Not determined	Not determined
Light Aromatic Hydrocarbons	Category 2	Not determined	Not determined
Ethylbenzene	Category 2	Not determined	Not determined
1,3,5-Trimethylbenzene	Category 2	Not determined	Not determined
Cumene	Category 2	Not determined	Not determined

Aspiration hazard

Section 11. Toxicological information

Name	Result
Xylene	ASPIRATION HAZARD - Category 1
1,2,4-Trimethylbenzene	ASPIRATION HAZARD - Category 1
Light Aromatic Hydrocarbons	ASPIRATION HAZARD - Category 1
Ethylbenzene	ASPIRATION HAZARD - Category 1
1,3,5-Trimethylbenzene	ASPIRATION HAZARD - Category 1
Cumene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Harmful if inhaled. Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation. May cause an allergic skin reaction.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : Suspected of causing genetic defects.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	4349.2 mg/kg
Inhalation (gases)	10176.5 ppm
Inhalation (vapors)	115.2 mg/l

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Xylene	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
1,2,4-Trimethylbenzene	Acute LC50 4910 µg/l Marine water	Crustaceans - Elasmopus pectenicrus - Adult	48 hours
	Acute LC50 7720 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Butyl Glycidyl Ether	Acute EC50 3.9 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
Ethylbenzene	Acute EC50 4600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 3600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 6530 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 2930 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
1,3,5-Trimethylbenzene	Acute LC50 13000 µg/l Marine water	Crustaceans - Cancer magister - Zoea	48 hours
	Acute LC50 12520 µg/l Fresh water	Fish - Carassius auratus	96 hours
	Chronic NOEC 400 µg/l Fresh water	Daphnia - Daphnia magna	21 days
Cumene	Acute EC50 2600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 7400 µg/l Fresh water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 10600 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 2700 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Xylene	-	-	Readily
Light Aromatic Hydrocarbons	-	-	Readily
Ethylbenzene	-	-	Readily

Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Epoxy Polymer	-	31	low
Xylene	-	8.1 to 25.9	low
1,2,4-Trimethylbenzene	-	243	low
Light Aromatic Hydrocarbons	-	10 to 2500	high
1,3,5-Trimethylbenzene	-	161	low
Cumene	-	94.69	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1263	UN1263	UN1263	UN1263	UN1263
UN proper shipping name	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL	PAINT RELATED MATERIAL
Transport hazard class(es)	3	3	3	3	3
Packing group	III	III	III	III	III
Environmental hazards	No.	No.	No.	No.	No.
Additional information	**Special provisions** Not Applicable	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2. 18-2.19 (Class 3).	**Special provisions** (ERG#128)	**Special provisions** Not Applicable	**Emergency schedules (EmS)** F-E, S-E

Section 14. Transport information

		Special provisions Not Applicable			

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Proper shipping name : Not available.

Ship type : Not available.

Pollution category : Not available.

Section 15. Regulatory information

SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	3
Flammability		3
Physical hazards		0

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

Procedure used to derive the classification

Classification	Justification
Flam. Liq. 3, H226	On basis of test data
Acute Tox. 4, H332	Calculation method
Skin Irrit. 2, H315	Calculation method
Eye Irrit. 2A, H319	Calculation method
Skin Sens. 1, H317	Calculation method
Muta. 2, H341	Calculation method
Carc. 2, H351	Calculation method
STOT SE 3, H335	Calculation method
STOT SE 3, H336	Calculation method

Section 16. Other information

STOT RE 2, H373	Calculation method
Asp. Tox. 1, H304	Calculation method

History

Date of printing	:	11/29/2015
Date of issue/Date of revision	:	11/29/2015
Date of previous issue	:	3/24/2015
Version	:	1.01
Key to abbreviations	:	ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

SAFETY DATA SHEET

B90A102

Section 1. Identification

Product name : ARMORSEAL® TREAD-PLEX Water Based Acrylic Floor Coating
Deck Gray

Product code : B90A102

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY
101 PROSPECT AVENUE, NW
CLEVELAND, OHIO 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : (800) 524-5979

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : CARCINOGENICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 2.8%

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : Suspected of causing cancer.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing. Do not breathe vapor.

Response : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention.

Storage : Store locked up.

Disposal Dispose of contents and container in accordance with all local, regional, national and international regulations.

Section 2. Hazards identification

Supplemental label elements

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. FOR INDUSTRIAL USE ONLY.

Please refer to the SDS for additional information. Do not transfer contents to other containers for storage.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Titanium Dioxide	≥3 - <5	13463-67-7
2-Methoxymethylethoxypropanol	≥1 - <3	34590-94-8
Carbon Black	≥0.3 - <1	1333-86-4

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Section 4. First aid measures

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Section 6. Accidental release measures

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Titanium Dioxide	**ACGIH TLV (United States, 3/2015).** TWA: 10 mg/m³ 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 15 mg/m³ 8 hours. Form: Total dust
2-Methoxymethylethoxypropanol	**ACGIH TLV (United States, 3/2015).** **Absorbed through skin.** TWA: 100 ppm 8 hours. TWA: 606 mg/m³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 909 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2013).** **Absorbed through skin.** TWA: 100 ppm 10 hours. TWA: 600 mg/m³ 10 hours. STEL: 150 ppm 15 minutes. STEL: 900 mg/m³ 15 minutes.

Carbon Black	**OSHA PEL (United States, 2/2013).** **Absorbed through skin.** TWA: 100 ppm 8 hours. TWA: 600 mg/m³ 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 3.5 mg/m³ 10 hours. TWA: 0.1 mg of PAHs/cm³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 3.5 mg/m³ 8 hours. **ACGIH TLV (United States, 3/2015).** TWA: 3 mg/m³ 8 hours. Form: Inhalable fraction

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state	:	Liquid.
Color	:	Not available.
Odor	:	Not available.
Odor threshold	:	Not available.
pH	:	9.2
Melting point	:	Not available.
Boiling point	:	100°C (212°F)
Flash point	:	Closed cup: >93.3°C (>199.9°F)
Evaporation rate	:	0.8 (butyl acetate = 1)
Flammability (solid, gas)	:	Not available.
Lower and upper explosive (flammable) limits	:	Lower: 1.1% Upper: 14%
Vapor pressure	:	0.31 kPa (2.333 mm Hg) [at 20°C]
Vapor density	:	1 [Air = 1]
Relative density	:	1.27
Solubility	:	Not available.
Partition coefficient: n-octanol/water	:	Not available.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
Viscosity	:	Kinematic (room temperature): >0.205 cm^2/s (>20.5 cSt) Kinematic (40°C (104°F)): >0.205 cm^2/s (>20.5 cSt)
Molecular weight	:	Not applicable.

Aerosol product

Heat of combustion	:	1.297 kJ/g

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	No specific data.
Incompatible materials	:	No specific data.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Carbon Black	LD50 Oral	Rat	>15400 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Titanium Dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-
2-Methoxymethylethoxypropanol	Eyes - Mild irritant	Human	-	8 milligrams	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Titanium Dioxide	-	2B	-
Carbon Black	-	2B	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
2-Methoxymethylethoxypropanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
2-Methoxymethylethoxypropanol	Category 2	Not determined	Not determined

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Titanium Dioxide	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours

Persistence and degradability

Not available.

Section 12. Ecological information

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Titanium Dioxide	-	352	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Emergency schedules (EmS)** Not Applicable

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the

Section 14. Transport information

substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Proper shipping name : Not available.

Ship type : Not available.

Pollution category : Not available.

Section 15. Regulatory information

SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	1
Flammability		0
Physical hazards		0

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

Procedure used to derive the classification

Classification	Justification
Carc. 2, H351	Calculation method
STOT RE 2, H373	Calculation method

History

Date of printing : 1/21/2016

Date of issue/Date of revision : 1/21/2016

Date of previous issue : 11/27/2015

Version : 1.07

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

Section 16. Other information

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

MATERIAL SAFETY DATA SHEET

B90W111
17 00

DATE OF PREPARATION
Mar 8, 2014

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
B90W111
PRODUCT NAME
ARMORSEAL® TREAD-PLEX Water Based Acrylic Floor Coating, Extra White
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 524-5979 www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
3	**34590-94-8**	**2-Methoxymethylethoxypropanol**		
		ACGIH TLV	100 ppm (Skin)	0.4 mm
		ACGIH TLV	150 ppm (Skin) STEL	
		OSHA PEL	100 ppm (Skin)	
		OSHA PEL	150 ppm (Skin) STEL	
12	**13463-67-7**	**Titanium Dioxide**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	1*
Flammability	0
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.
SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	Not Applicable	Not Applicable	Not Applicable

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	10.82 lb/gal	1296 g/l
SPECIFIC GRAVITY	1.30	
BOILING POINT	212 - 357 °F	100 - 180 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	57%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	9.2	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.81 lb/gal	97 g/l	Less Water and Federally Exempt Solvents
0.38 lb/gal	46 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable
CONDITIONS TO AVOID
None known.
INCOMPATIBILITY
None known.
HAZARDOUS DECOMPOSITION PRODUCTS
By fire: Carbon Dioxide, Carbon Monoxide
HAZARDOUS POLYMERIZATION
Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS
IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."
TOXICOLOGY DATA

CAS No.	Ingredient Name				
34590-94-8	**2-Methoxymethylethoxypropanol**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		5135 mg/kg
13463-67-7	**Titanium Dioxide**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION
No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD
Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.
US Ground (DOT)
Not Regulated for Transportation.
Canada (TDG)
Not Regulated for Transportation.
IMO
Not Regulated for Transportation.
IATA/ICAO
Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element

No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.
CALIFORNIA PROPOSITION 65
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
TSCA CERTIFICATION
All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

B97LD2022
04 00

DATE OF PREPARATION
Apr 4, 2014

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
B97LD2022
PRODUCT NAME
PRO PARK™ Waterborne Traffic Marking Paint, Blue
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 524-5979 www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
2	**1569-01-3**	**1-Propoxy-2-propanol**		
		ACGIH TLV	Not Available	1.7 mm
		OSHA PEL	Not Available	
15	**14808-60-7**	**Quartz**		
		ACGIH TLV	0.025 mg/m3 as Resp. Dust	
		OSHA PEL	0.1 mg/m3 as Resp. Dust	
39	**1317-65-3**	**Calcium Carbonate**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	
0.5	**13463-67-7**	**Titanium Dioxide**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	2*
Flammability	2
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.
SIGNS AND SYMPTOMS OF OVEREXPOSURE
Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
150 °F PMCC	1.3	16.9	Combustible, Flash above 99 and below 200 °F

EXTINGUISHING MEDIA
Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS
Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.
Application to hot surfaces requires special precautions.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES
Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY
DOL Storage Class IIIA

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE
Contents are COMBUSTIBLE. Keep away from heat and open flame.
Consult NFPA Code. Use approved Bonding and Grounding procedures.
Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE
Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.
This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

VENTILATION
Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION
If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.
When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES
Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION
Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS
Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	13.14 lb/gal	1574 g/l
SPECIFIC GRAVITY	1.58	
BOILING POINT	212 - 303 °F	100 - 150 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	39%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	9.5	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.42 lb/gal	50 g/l	Less Water and Federally Exempt Solvents
0.27 lb/gal	32 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

TOXICOLOGY DATA

CAS No.	Ingredient Name				
1569-01-3	**1-Propoxy-2-propanol**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		2800 mg/kg
14808-60-7	**Quartz**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
1317-65-3	**Calcium Carbonate**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
13463-67-7	**Titanium Dioxide**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

Not Regulated for Transportation.

Canada (TDG)

Not Regulated for Transportation.

IMO

Not Regulated for Transportation.

IATA/ICAO

Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element

No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

B97YD2467
07 00

DATE OF PREPARATION
Aug 20, 2014

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
B97YD2467
PRODUCT NAME
PRO PARK™ Waterborne Traffic Marking Paint, Yellow
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 524-5979 www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
2	**1569-01-3**	**1-Propoxy-2-propanol**		
		ACGIH TLV	Not Available	1.7 mm
		OSHA PEL	Not Available	
15	**14808-60-7**	**Quartz**		
		ACGIH TLV	0.025 mg/m3 as Resp. Dust	
		OSHA PEL	0.1 mg/m3 as Resp. Dust	
38	**1317-65-3**	**Calcium Carbonate**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	
1	**13463-67-7**	**Titanium Dioxide**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	2*
Flammability	2
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.
SIGNS AND SYMPTOMS OF OVEREXPOSURE
Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
150 °F PMCC	1.3	16.9	Combustible, Flash above 99 and below 200 °F

EXTINGUISHING MEDIA
Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS
Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.
Application to hot surfaces requires special precautions.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES
Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY
DOL Storage Class IIIA

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE
Contents are COMBUSTIBLE. Keep away from heat and open flame.
Consult NFPA Code. Use approved Bonding and Grounding procedures.
Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE
Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.
This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

VENTILATION
Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION
If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.
When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES
Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION
Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS
Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	13.20 lb/gal	1581 g/l
SPECIFIC GRAVITY	1.59	
BOILING POINT	212 - 303 °F	100 - 150 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	38%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	9.0	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.41 lb/gal	49 g/l	Less Water and Federally Exempt Solvents
0.27 lb/gal	32 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

TOXICOLOGY DATA

CAS No.	Ingredient Name				
1569-01-3	**1-Propoxy-2-propanol**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		2800 mg/kg
14808-60-7	**Quartz**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
1317-65-3	**Calcium Carbonate**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
13463-67-7	**Titanium Dioxide**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

Not Regulated for Transportation.

Canada (TDG)

Not Regulated for Transportation.

IMO

Not Regulated for Transportation.

IATA/ICAO

Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element

No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

10014
05 00

DATE OF PREPARATION
Mar 16, 2009

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
10014
PRODUCT NAME
ColorTouch™ Spray Enamel, Clear
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
Consumer Group
Cleveland, OH 44115

Telephone Numbers and Websites

Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
18	**74-98-6**	**Propane**		
		ACGIH TLV	2500 PPM	760 mm
		OSHA PEL	1000 PPM	
17	**106-97-8**	**Butane**		
		ACGIH TLV	800 PPM	760 mm
		OSHA PEL	800 PPM	
4	**64742-89-8**	**Lt. Aliphatic Hydrocarbon Solvent**		
		ACGIH TLV	100 PPM	53 mm
		OSHA PEL	100 PPM	
6	**64742-89-8**	**V. M. & P. Naphtha**		
		ACGIH TLV	300 PPM	12 mm
		OSHA PEL	300 PPM	
		OSHA PEL	400 PPM STEL	
15	**108-88-3**	**Toluene**		
		ACGIH TLV	20 PPM	22 mm
		OSHA PEL	100 PPM (Skin)	
		OSHA PEL	150 PPM (Skin) STEL	
1	**95-63-6**	**1,2,4-Trimethylbenzene**		
		ACGIH TLV	25 PPM	2.03 mm
		OSHA PEL	25 PPM	
28	**67-64-1**	**Acetone**		
		ACGIH TLV	500 PPM	180 mm
		ACGIH TLV	750 PPM STEL	
		OSHA PEL	1000 PPM	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	2
Flammability	4
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.
Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver, urinary, cardiovascular and reproductive systems.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.
Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	EXTINGUISHING MEDIA
Propellant < 0 °F	0.9	12.8	Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Containers may explode when exposed to extreme heat.
Application to hot surfaces requires special precautions.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

- Remove all sources of ignition. Ventilate the area.
- Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Available

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.
During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.
Consult NFPA Code. Use approved Bonding and Grounding procedures.
Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.
This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.
When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

None required for normal application of aerosol products where minimal skin contact is expected. For long or repeated contact, wear chemical resistant gloves.

EYE PROTECTION
Wear safety spectacles with unperforated sideshields.
OTHER PRECAUTIONS
Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	5.79 lb/gal	693 g/l
SPECIFIC GRAVITY	0.70	
BOILING POINT	<0 - 337 °F	<-18 - 169 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	94%	
EVAPORATION RATE	Faster than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	7.0	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)
Volatile Weight 62.99% Less Water and Federally Exempt Solvents

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable
CONDITIONS TO AVOID
None known.
INCOMPATIBILITY
None known.
HAZARDOUS DECOMPOSITION PRODUCTS
By fire: Carbon Dioxide, Carbon Monoxide
HAZARDOUS POLYMERIZATION
Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS
No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.
Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.
TOXICOLOGY DATA

CAS No.	Ingredient Name				
74-98-6	**Propane**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
106-97-8	**Butane**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
64742-89-8	**Lt. Aliphatic Hydrocarbon Solvent**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
64742-89-8	**V. M. & P. Naphtha**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
108-88-3	**Toluene**				
		LC50	RAT	4HR	4000 ppm
		LD50	RAT		5000 mg/kg
95-63-6	**1,2,4-Trimethylbenzene**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
67-64-1	**Acetone**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		5800 mg/kg

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION
No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.
Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

US Ground (DOT)

May be classed as Consumer Commodity, ORM-D
UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, (ERG#126)

Canada (TDG)

May be classed as Consumer Commodity, ORM-D
UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, (ERG#126)

IMO

May be shipped as Limited Quantity
UN1950, AEROSOLS, CLASS 2.1, LIMITED QUANTITY, EmS F-D, S-U

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
108-88-3	Toluene	15	
95-63-6	1,2,4-Trimethylbenzene	1	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

K37W351
13 00

DATE OF PREPARATION
Sep 8, 2013

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
K37W351
PRODUCT NAME
EMERALD™ Interior Acrylic Latex Satin, Extra White
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
24	**13463-67-7**	**Titanium Dioxide**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	1*
Flammability	0
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	Not Applicable	Not Applicable	Not Applicable

EXTINGUISHING MEDIA
Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Required for long or repeated contact.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	11.37 lb/gal	1362 g/l
SPECIFIC GRAVITY	1.37	
BOILING POINT	212 - 213 °F	100 - 100 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	57%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	9.0	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.00 lb/gal	0 g/l	Less Water and Federally Exempt Solvents
0.00 lb/gal	0 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable
CONDITIONS TO AVOID
None known.
INCOMPATIBILITY
None known.
HAZARDOUS DECOMPOSITION PRODUCTS
By fire: Carbon Dioxide, Carbon Monoxide
HAZARDOUS POLYMERIZATION
Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS
IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."
TOXICOLOGY DATA

CAS No.	Ingredient Name				
13463-67-7	**Titanium Dioxide**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION
No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD
Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.
US Ground (DOT)
Not Regulated for Transportation.
Canada (TDG)
Not Regulated for Transportation.
IMO
Not Regulated for Transportation.
IATA/ICAO
Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element

No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.
CALIFORNIA PROPOSITION 65
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
TSCA CERTIFICATION
All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

K38W351
15 00

DATE OF PREPARATION
Mar 23, 2014

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
K38W351
PRODUCT NAME
EMERALD™ Interior Acrylic Latex Semi-Gloss, Extra White
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
25	**13463-67-7**	**Titanium Dioxide**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	1*
Flammability	0
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	Not Applicable	Not Applicable	Not Applicable

EXTINGUISHING MEDIA
Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Required for long or repeated contact.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	10.74 lb/gal	1286 g/l
SPECIFIC GRAVITY	1.29	
BOILING POINT	212 - 213 °F	100 - 100 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	61%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	9.0	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.00 lb/gal	0 g/l	Less Water and Federally Exempt Solvents
0.00 lb/gal	0 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable
CONDITIONS TO AVOID
None known.
INCOMPATIBILITY
None known.
HAZARDOUS DECOMPOSITION PRODUCTS
By fire: Carbon Dioxide, Carbon Monoxide
HAZARDOUS POLYMERIZATION
Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS
IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."
TOXICOLOGY DATA

CAS No.	Ingredient Name				
13463-67-7	**Titanium Dioxide**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION
No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD
Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.
US Ground (DOT)
Not Regulated for Transportation.
Canada (TDG)
Not Regulated for Transportation.
IMO
Not Regulated for Transportation.
IATA/ICAO
Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element

No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.
CALIFORNIA PROPOSITION 65
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
TSCA CERTIFICATION
All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

K38W353
13 00

DATE OF PREPARATION
Mar 23, 2014

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
K38W353
PRODUCT NAME
EMERALD™ Interior Acrylic Latex Semi-Gloss, Deep Base
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
6	**13463-67-7**	**Titanium Dioxide**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	1*
Flammability	0
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	Not Applicable	Not Applicable	Not Applicable

EXTINGUISHING MEDIA
Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Required for long or repeated contact.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	9.11 lb/gal	1091 g/l
SPECIFIC GRAVITY	1.10	
BOILING POINT	212 - 213 °F	100 - 100 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	66%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	9.0	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.00 lb/gal	0 g/l	Less Water and Federally Exempt Solvents
0.00 lb/gal	0 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable
CONDITIONS TO AVOID
None known.
INCOMPATIBILITY
None known.
HAZARDOUS DECOMPOSITION PRODUCTS
By fire: Carbon Dioxide, Carbon Monoxide
HAZARDOUS POLYMERIZATION
Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS
IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."
TOXICOLOGY DATA

CAS No.	Ingredient Name				
13463-67-7	**Titanium Dioxide**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION
No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD
Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.
US Ground (DOT)
Not Regulated for Transportation.
Canada (TDG)
Not Regulated for Transportation.
IMO
Not Regulated for Transportation.
IATA/ICAO
Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element

No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.
CALIFORNIA PROPOSITION 65
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
TSCA CERTIFICATION
All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

K43R58
12 00

DATE OF PREPARATION
Mar 19, 2014

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
K43R58
PRODUCT NAME
RESILIENCE® Exterior Acrylic Latex Satin, Primary Red
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
0.1	**14464-46-1**	**Cristobalite**		
		ACGIH TLV	0.025 mg/m3 as Resp. Dust	
		OSHA PEL	0.05 mg/m3 as Resp. Dust	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	1*
Flammability	0
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.
SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	Not Applicable	Not Applicable	Not Applicable

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	9.36 lb/gal	1121 g/l
SPECIFIC GRAVITY	1.13	
BOILING POINT	212 - 213 °F	100 - 100 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	59%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	9.0	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.32 lb/gal	38 g/l	Less Water and Federally Exempt Solvents
0.13 lb/gal	16 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable
CONDITIONS TO AVOID
None known.
INCOMPATIBILITY
None known.
HAZARDOUS DECOMPOSITION PRODUCTS
By fire: Carbon Dioxide, Carbon Monoxide
HAZARDOUS POLYMERIZATION
Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS
Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.
TOXICOLOGY DATA

CAS No.	Ingredient Name				
14464-46-1	**Cristobalite**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION
No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD
Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.
US Ground (DOT)
Not Regulated for Transportation.
Canada (TDG)
Not Regulated for Transportation.
IMO
Not Regulated for Transportation.
IATA/ICAO
Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element

No ingredients in this product are subject to SARA 313 (40 CFR 372.65C) Supplier Notification.
CALIFORNIA PROPOSITION 65
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
TSCA CERTIFICATION
All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

K43W53
27 00

DATE OF PREPARATION
Jun 29, 2016

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
K43W53
PRODUCT NAME
RESILIENCE® Exterior Acrylic Latex Satin, Deep Base
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 W. Prospect Avenue
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units		Vapor Pressure
0.1	**14464-46-1**	**Cristobalite**			
		ACGIH TLV	0.025	mg/m3 as Resp. Dust	
		OSHA PEL	0.05	mg/m3 as Resp. Dust	
5	**13463-67-7**	**Titanium Dioxide**			
		ACGIH TLV	10	mg/m3 as Dust	
		OSHA PEL	10	mg/m3 Total Dust	
		OSHA PEL	5	mg/m3 Respirable Fraction	
2	**1314-13-2**	**Zinc Oxide**			
		ACGIH TLV		Not Available	
		OSHA PEL		Not Available	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	1*
Flammability	0
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.
SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	Not Applicable	Not Applicable	Not Applicable

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	9.84 lb/gal	1179 g/l
SPECIFIC GRAVITY	1.18	
BOILING POINT	212 - 213 °F	100 - 100 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	59%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	> 2.0, < 11.5	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

0.32 lb/gal	38 g/l	Less Water and Federally Exempt Solvents
0.13 lb/gal	16 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

TOXICOLOGY DATA

CAS No.	Ingredient Name				
14464-46-1	**Cristobalite**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
13463-67-7	**Titanium Dioxide**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
1314-13-2	**Zinc Oxide**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

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Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)

Not Regulated for Transportation.

Canada (TDG)

Not Regulated for Transportation.

IMO

Not Regulated for Transportation.

IMO

Not Regulated for Transportation.

IATA/ICAO

Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
	Zinc Compound	2	1.6

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

K45T154
18 00

DATE OF PREPARATION
Sep 8, 2013

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
K45T154
PRODUCT NAME
PRO INDUSTRIAL™ Pre-Catalyzed Waterbased Epoxy Eg-Shel, Neutral Base
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	(800) 524-5979 www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units		Vapor Pressure
1	**111-77-3**	**2-(2-Methoxyethoxy)-ethanol**			
		ACGIH TLV	Not Available		1 mm
		OSHA PEL	Not Available		
2	**29911-28-2**	**1-(2-Butoxymethylethoxy)-propanol**			
		ACGIH TLV	Not Available		0.06 mm
		OSHA PEL	Not Available		
1	**14464-46-1**	**Cristobalite**			
		ACGIH TLV	0.025	mg/m3 as Resp. Dust	
		OSHA PEL	0.05	mg/m3 as Resp. Dust	
5	**1332-58-7**	**Kaolin**			
		ACGIH TLV	2	mg/m3 as Resp. Dust	
		OSHA PEL	10	mg/m3 Total Dust	
		OSHA PEL	5	mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	2*
Flammability	0
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.
SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	Not Applicable	Not Applicable	Not Applicable

EXTINGUISHING MEDIA
Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS
Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES
Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY
Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE
Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE
Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.
This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

VENTILATION
Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION
If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.
When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES
Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION
Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	8.99 lb/gal	1076 g/l
SPECIFIC GRAVITY	1.08	
BOILING POINT	212 - 449 °F	100 - 231 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	68%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	Not Available	
pH	9.5	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

1.11 lb/gal	133 g/l	Less Water and Federally Exempt Solvents
0.41 lb/gal	49 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.

TOXICOLOGY DATA

CAS No.	Ingredient Name				
111-77-3	**2-(2-Methoxyethoxy)-ethanol**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		5500 mg/kg
29911-28-2	**1-(2-Butoxymethylethoxy)-propanol**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
14464-46-1	**Cristobalite**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
1332-58-7	**Kaolin**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (ocean, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport.

US Ground (DOT)
Not Regulated for Transportation.
Canada (TDG)
Not Regulated for Transportation.
IMO
Not Regulated for Transportation.
IATA/ICAO
Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
	Glycol Ethers	2	

CALIFORNIA PROPOSITION 65
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
TSCA CERTIFICATION
All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

K45W151
05 00

DATE OF PREPARATION
Apr 21, 2010

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
K45W151
PRODUCT NAME
PRO INDUSTRIAL™ Pre-Catalyzed Waterbased Epoxy Eg-Shel, Extra White
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
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**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units		Vapor Pressure
1	**111-77-3**	**2-(2-Methoxyethoxy)-ethanol**			
		ACGIH TLV	Not Available		1 mm
		OSHA PEL	Not Available		
2	**29911-28-2**	**1-(2-Butoxymethylethoxy)-propanol**			
		ACGIH TLV	Not Available		0.06 mm
		OSHA PEL	Not Available		
0.9	**14464-46-1**	**Cristobalite**			
		ACGIH TLV	0.025	mg/m3 as Resp. Dust	
		OSHA PEL	0.05	mg/m3 as Resp. Dust	
1	**471-34-1**	**Calcium Carbonate**			
		ACGIH TLV	10	mg/m3 as Dust	
		OSHA PEL	15	mg/m3 Total Dust	
		OSHA PEL	5	mg/m3 Respirable Fraction	
22	**13463-67-7**	**Titanium Dioxide**			
		ACGIH TLV	10	mg/m3 as Dust	
		OSHA PEL	10	mg/m3 Total Dust	
		OSHA PEL	5	mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	2*
Flammability	0
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.
SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	N.A.	N.A.	Not Applicable

EXTINGUISHING MEDIA
Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS
Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES
Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
- Remove all sources of ignition. Ventilate the area.
- Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY
Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE
Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE
Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.
This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

VENTILATION
Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION
If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.
When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES
Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION
Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	10.63 lb/gal	1274 g/l
SPECIFIC GRAVITY	1.28	
BOILING POINT	212 - 449 °F	100 - 231 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	63%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	9.5	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

1.18 lb/gal	142 g/l	Less Water and Federally Exempt Solvents
0.51 lb/gal	61 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

TOXICOLOGY DATA

CAS No.	Ingredient Name				
111-77-3	**2-(2-Methoxyethoxy)-ethanol**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		5500 mg/kg
29911-28-2	**1-(2-Butoxymethylethoxy)-propanol**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
14464-46-1	**Cristobalite**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
471-34-1	**Calcium Carbonate**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
13463-67-7	**Titanium Dioxide**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

US Ground (DOT)
Not Regulated for Transportation.
Canada (TDG)
Not Regulated for Transportation.
IMO
Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
	Glycol Ethers	2	

CALIFORNIA PROPOSITION 65
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
TSCA CERTIFICATION
All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

MATERIAL SAFETY DATA SHEET

K46T154
12 00

DATE OF PREPARATION
Nov 30, 2010

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
K46T154
PRODUCT NAME
PRO INDUSTRIAL™ Pre-Catalyzed Waterbased Semi-Gloss Epoxy, Neutral Base
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
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**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units		Vapor Pressure
1	**111-77-3**	**2-(2-Methoxyethoxy)-ethanol**			
		ACGIH TLV	Not Available		1 mm
		OSHA PEL	Not Available		
2	**29911-28-2**	**1-(2-Butoxymethylethoxy)-propanol**			
		ACGIH TLV	Not Available		0.06 mm
		OSHA PEL	Not Available		
4	**1332-58-7**	**Kaolin**			
		ACGIH TLV	2	mg/m3 as Resp. Dust	
		OSHA PEL	10	mg/m3 Total Dust	
		OSHA PEL	5	mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	2
Flammability	0
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.
SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	N.A.	N.A.	Not Applicable

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.

Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.

Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

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VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	8.92 lb/gal	1068 g/l
SPECIFIC GRAVITY	1.07	
BOILING POINT	212 - 449 °F	100 - 231 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	67%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	9.5	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

1.21 lb/gal	145 g/l	Less Water and Federally Exempt Solvents
0.46 lb/gal	55 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable
CONDITIONS TO AVOID
None known.
INCOMPATIBILITY
None known.
HAZARDOUS DECOMPOSITION PRODUCTS
By fire: Carbon Dioxide, Carbon Monoxide
HAZARDOUS POLYMERIZATION
Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS
No ingredient in this product is an IARC, NTP or OSHA listed carcinogen.
TOXICOLOGY DATA

CAS No.	Ingredient Name			
111-77-3	**2-(2-Methoxyethoxy)-ethanol**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		5500 mg/kg
29911-28-2	**1-(2-Butoxymethylethoxy)-propanol**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
1332-58-7	**Kaolin**			
		LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION
No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD
Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

US Ground (DOT)
Not Regulated for Transportation.
Canada (TDG)
Not Regulated for Transportation.
IMO
Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
	Glycol Ethers	2	

CALIFORNIA PROPOSITION 65
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
TSCA CERTIFICATION
All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

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This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

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MATERIAL SAFETY DATA SHEET

K46W151
06 00

DATE OF PREPARATION
Apr 5, 2010

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
K46W151
PRODUCT NAME
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MANUFACTURER'S NAME
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**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units		Vapor Pressure
2	**111-77-3**	**2-(2-Methoxyethoxy)-ethanol**			
		ACGIH TLV	Not Available		1 mm
		OSHA PEL	Not Available		
2	**29911-28-2**	**1-(2-Butoxymethylethoxy)-propanol**			
		ACGIH TLV	Not Available		0.06 mm
		OSHA PEL	Not Available		
0.1	**14464-46-1**	**Cristobalite**			
		ACGIH TLV	0.025	mg/m3 as Resp. Dust	
		OSHA PEL	0.05	mg/m3 as Resp. Dust	
22	**13463-67-7**	**Titanium Dioxide**			
		ACGIH TLV	10	mg/m3 as Dust	
		OSHA PEL	10	mg/m3 Total Dust	
		OSHA PEL	5	mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	2*
Flammability	0
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

In a confined area vapors in high concentration may cause headache, nausea or dizziness.
SIGNS AND SYMPTOMS OF OVEREXPOSURE
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
CANCER INFORMATION
For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
Not Applicable	N.A.	N.A.	Not Applicable

EXTINGUISHING MEDIA
Carbon Dioxide, Dry Chemical, Alcohol Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS
Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES
Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
- Remove all sources of ignition. Ventilate the area.
- Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY
Not Applicable

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE
Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE
Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.
This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).

VENTILATION
Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION
If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.
When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES
Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION
Wear safety spectacles with unperforated sideshields.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	10.31 lb/gal	1235 g/l
SPECIFIC GRAVITY	1.24	
BOILING POINT	212 - 449 °F	100 - 231 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	63%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	9.5	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

1.20 lb/gal	144 g/l	Less Water and Federally Exempt Solvents
0.52 lb/gal	62 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

TOXICOLOGY DATA

CAS No.	Ingredient Name				
111-77-3	**2-(2-Methoxyethoxy)-ethanol**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		5500 mg/kg
29911-28-2	**1-(2-Butoxymethylethoxy)-propanol**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
14464-46-1	**Cristobalite**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
13463-67-7	**Titanium Dioxide**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

US Ground (DOT)
Not Regulated for Transportation.
Canada (TDG)
Not Regulated for Transportation.
IMO
Not Regulated for Transportation.

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
	Glycol Ethers	2	

CALIFORNIA PROPOSITION 65
WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
TSCA CERTIFICATION
All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

SAFETY DATA SHEET

WL9990024

Section 1. Identification

Product name : MAXFLEX™ Acrylic Elastomeric Sealant

Product code : WL9990024

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : Not available.

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : CARCINOGENICITY - Category 2

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : Suspected of causing cancer.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves. Wear eye or face protection. Wear protective clothing.

Response : IF exposed or concerned: Get medical attention.

Storage : Store locked up.

Disposal Dispose of contents and container in accordance with all local, regional, national and international regulations.

Section 2. Hazards identification

Supplemental label elements

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Adequate ventilation required when sanding or abrading the dried film. If Adequate ventilation cannot be provided wear an approved particulate respirator (NIOSH approved). Follow respirator manufacturer's directions for respirator use. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Abrading or sanding of the dry film may release Crystalline Silica which has been shown to cause lung damage and cancer under long term exposure.

Please refer to the SDS for additional information. Do not transfer contents to other containers for storage.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Diethylene Glycol Dibenzoate	≥3 - <5	120-55-8
Titanium Dioxide	≥1 - <3	13463-67-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Section 4. First aid measures

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions :

Section 6. Accidental release measures

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Diethylene Glycol Dibenzoate Titanium Dioxide	None. **ACGIH TLV (United States, 3/2015).** TWA: 10 mg/m³ 8 hours. **OSHA PEL (United States, 2/2013).** TWA: 15 mg/m³ 8 hours. Form: Total dust

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Section 8. Exposure controls/personal protection

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : 8.7

Melting point : Not available.

Boiling point : 100°C (212°F)

Flash point : Closed cup: >93.3°C (>199.9°F)

Evaporation rate : 0.09 (butyl acetate = 1)

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : 0.31 kPa (2.333 mm Hg) [at 20°C]

Vapor density : 1 [Air = 1]

Relative density : 1.39

Solubility : Not available.

Section 9. Physical and chemical properties

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (room temperature): >0.205 cm^2/s (>20.5 cSt)
Kinematic (40°C (104°F)): >0.205 cm^2/s (>20.5 cSt)

Molecular weight : Not applicable.

Aerosol product

Heat of combustion : 2.251 kJ/g

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Diethylene Glycol Dibenzoate	LD50 Oral	Rat	2830 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Diethylene Glycol Dibenzoate	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
Titanium Dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Titanium Dioxide	-	2B	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	68161.9 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Titanium Dioxide	Acute LC50 >1000000 µg/l Marine water	Fish - Fundulus heteroclitus	96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Titanium Dioxide	-	352	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-

Section 14. Transport information

Transport hazard class(es)	-	-	-	-	-
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Emergency schedules (EmS)** Not Applicable

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Proper shipping name : Not available.

Ship type : Not available.

Pollution category : Not available.

Section 15. Regulatory information

SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	1
Flammability		0
Physical hazards		0

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

Procedure used to derive the classification

Classification **Justification**

Section 16. Other information

Carc. 2, H351	Calculation method

History

Date of printing	:	2/11/2016
Date of issue/Date of revision	:	2/11/2016
Date of previous issue	:	12/8/2015
Version	:	1.07
Key to abbreviations	:	ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

MATERIAL SAFETY DATA SHEET

—SECTION I—

KRYLON
6830 COCHRAN ROAD
SOLON, OH 44139

EMERGENCY TELEPHONE NO.
(216) 292-7400
INFORMATION TELEPHONE NO.
(800) 832-2541

DATE OF PREPARATION
1 - MAY - 92

©1992, The Sherwin-Williams Co.

NOW™ Spray Paint

NOW/KR1

						10 Ounces Net Weight									
—SECTION II— CAS No.	HAZARDOUS INGREDIENT (percent by weight)	ACGIH TLV <STEL>	OSHA PEL <STEL>	Units	Vapor Pressure (mm Hg)	21-201 Aluminum	21-205 Green	21-206 Yellow	21-207 Royal Blue	21-208 Cocoa Brown	21-211 W.I. Flat Black	21-212 Gloss White	21-213 Gloss Black	21-215 W.I. Flat White	21-217 Wagon Red
74-98-6	Propane (propellant)		1000	PPM	760.0	15	14	15	14	14	15	14	14	14	14
75-28-5	2-Methylpropane (propellant)	Not Established			760.0	15	14	15	14	14	15	14	14	14	14
108-88-3 §	Toluene	100 <150>	100 <150>	PPM	22.0	53	5	14	9	12	13	13	14	11	6
25551-13-7	Trimethylbenzenes	25	25	PPM	10.0	3									
25550-14-5	Ethyl Toluene	Not Established				1									
100-41-4 §	Ethylbenzene	100 <125>	100 <125>	PPM	7.1						1	2	1	1	2
1330-20-7 §	Xylene	100 <150>	100 <150>	PPM	5.9		16	8	9	9	11	10	11	9	10
64742-95-6	Lt. Aromatic Naphtha	100		PPM	3.8	4					2		2		
67-64-1 §	Acetone	750 <1000>	750 <1000>	PPM	180.0		37	33	37	35	29	28	33	36	39
763-69-9	Ethyl 3-Ethoxypropionate.	Not Established		PPM	1.1		3	3	6	4		3	2		5
14807-96-6	Talc	2	2	Mg/M3	as Resp. Dust						5			4	
13463-67-7	Titanium Dioxide.	10	10[5]	Mg/M3	as Dust [Resp. Fraction]			2				8		4	
1333-86-4	Carbon Black.	3.5	3.5	Mg/M3	as Dust						1		1		
	VOC as a percent by weight, per BAAQMD Rule 49					95	88	86	88	87	86	82	80	86	88
	HMIS® Ratings (Health - Flammability - Reactivity)					2-4-0	2-4-0	2-4-0	2-4-0	2-4-0	2-4-0	2-4-0	2-4-0	2-4-0	2-4-0

§ Ingredient subject to the reporting requirements of the Superfund Amendments and Reauthorization Act (SARA) Section 313, 40 CFR 372.65 C

NOW™ Spray Paint

NOW/KR

Section III — PHYSICAL DATA

PRODUCT WEIGHT – N.A.
SPECIFIC GRAVITY – N.A.
BOILING RANGE – <0-342 °F
SOLUBILITY IN WATER – N.A.

EVAPORATION RATE – Faster than Ether
VAPOR DENSITY – Heavier than Air
MELTING POINT – N.A.

Section IV — FIRE AND EXPLOSION HAZARD DATA

LAMMABILITY CLASSIFICATION *FLASH POINT* <0 °F PMCC LEL 1.0 UEL 12.8
RED LABEL – Extremely Flammable, Flash below 21 °F
TINGUISHING MEDIA
Carbon Dioxide, Dry Chemical, Foam
USUAL FIRE AND EXPLOSION HAZARDS
Closed containers may explode (due to the build-up of pressure) when exposed to extreme at.
ECIAL FIRE FIGHTING PROCEDURES
Full protective equipment including self-contained breathing apparatus should be used. ter spray may be ineffective. If water is used, fog nozzles are preferable. Water may be ed to cool closed containers to prevent pressure build-up and possible autoignition or plosion when exposed to extreme heat.

Section V — HEALTH HAZARD DATA

UTES OF EXPOSURE
Exposure may be by INHALATION and/or SKIN or EYE contact, depending on conditions of use. llow recommendations for proper use, ventilation, and personal protective equipment to nimize exposure.
CUTE Health Hazards
FECTS OF OVEREXPOSURE
Irritation of eyes, skin and respiratory system. May cause nervous system depression. treme overexposure may result in unconsciousness and possibly death.
GNS AND SYMPTOMS OF OVEREXPOSURE
Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure vapors or spray mists.
Redness and itching or burning sensation may indicate eye or excessive skin exposure.
DICAL CONDITIONS AGGRAVATED BY EXPOSURE
None generally recognized.
ERGENCY AND FIRST AID PROCEDURES
If INHALED: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
If on SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
If in EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
If SWALLOWED: Seek medical attention.
HRONIC Health Hazards
No ingredient in these products is an IARC, NTP, or OSHA listed carcinogen.
Prolonged overexposure to solvent ingredients in Section II may cause adverse effects to e liver, urinary, blood-forming, cardiovascular, and reproductive systems.
Reports have associated repeated and prolonged overexposure to solvents with permanent brain d nervous system damage.

Section VI — REACTIVITY DATA

ABILITY – Stable
COMPATIBILITY
None known.
ZARDOUS DECOMPOSITION PRODUCTS
By fire: Carbon Dioxide, Carbon Monoxide
ZARDOUS POLYMERIZATION – Will Not Occur

Section VII — SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Remove all sources of ignition. Ventilate and remove with inert absorbent.
WASTE DISPOSAL METHOD
Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.
Do not incinerate. Depressurize container. Dispose of in accordance with Federal, State, and Local regulations regarding pollution.

Section VIII — PROTECTION INFORMATION

PRECAUTIONS TO BE TAKEN IN USE
Use only with adequate ventilation. Avoid breathing vapor and spray mist. Avoid contact with skin and eyes. Wash hands after using.
This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section II) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section II, the applicable limits for nuisance dusts are ACGIH TLV 10 mg./m3 (total dust), OSHA PEL 15 mg./m3 (total dust), 5 mg./m3 (respirable fraction).
VENTILATION
Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section II is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.
RESPIRATORY PROTECTION
If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section II.
When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.
PROTECTIVE GLOVES
Wear gloves which are recommended by glove supplier for protection against materials in Section II.
EYE PROTECTION
Wear safety spectacles with unperforated sideshields.

Section IX — PRECAUTIONS

DOL STORAGE CATEGORY – 1A
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Contents are EXTREMELY FLAMMABLE. Keep away from heat, sparks, and open flame. Vapors will accumulate readily and may ignite explosively.
During use and until all vapors are gone: Keep area ventilated - Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition.
Consult NFPA Code. Use approved Bonding and Grounding procedures.
Contents under pressure. Do not puncture, incinerate, or expose to temperature above 120 °F. Heat from sunlight, radiators, stoves, hot water, and other heat sources could cause container to burst. Do not take internally. Keep out of the reach of children.
OTHER PRECAUTIONS
Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

SAFETY DATA SHEET

C-77

Section 1. Identification

Product name : Shrink-Free Spackling

Product code : C-77

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Manufacturer : THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Emergency telephone number of the company : (216) 566-2917

Product Information Telephone Number : Not available.

Regulatory Information Telephone Number : (216) 566-2902

Transportation Emergency Telephone Number : (800) 424-9300

Section 2. Hazards identification

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture : Not classified.

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 16.5%

GHS label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal Not applicable.

Supplemental label elements WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Please refer to the SDS for additional information. Do not transfer contents to other containers for storage.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : No specific data.

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : 8.5

Melting point : Not available.

Section 9. Physical and chemical properties

Boiling point	:	100°C (212°F)
Flash point	:	Closed cup: >93.3°C (>199.9°F)
Evaporation rate	:	0.09 (butyl acetate = 1)
Flammability (solid, gas)	:	Not available.
Lower and upper explosive (flammable) limits	:	Not available.
Vapor pressure	:	0.31 kPa (2.333 mm Hg) [at 20°C]
Vapor density	:	1 [Air = 1]
Relative density	:	0.52
Solubility	:	Not available.
Partition coefficient: n-octanol/water	:	Not available.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
Viscosity	:	Kinematic (room temperature): >0.205 cm^2/s (>20.5 cSt) Kinematic (40°C (104°F)): >0.205 cm^2/s (>20.5 cSt)
Molecular weight	:	Not applicable.
Aerosol product		
Heat of combustion	:	0.59 kJ/g

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	No specific data.
Incompatible materials	:	No specific data.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Not available.

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity
Not available.

Teratogenicity
Not available.

Specific target organ toxicity (single exposure)
Not available.

Specific target organ toxicity (repeated exposure)
Not available.

Aspiration hazard
Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects
Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Special provisions** Not Applicable	**Special provisions** Not Applicable

Section 14. Transport information

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Proper shipping name : Not available.

Ship type : Not available.

Pollution category : Not available.

Section 15. Regulatory information

SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	1
Flammability	0
Physical hazards	0

The customer is responsible for determining the PPE code for this material.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

Procedure used to derive the classification

Classification	Justification
Not classified.	

History

Date of printing : 3/19/2016

Date of issue/Date of revision : 3/19/2016

Date of previous issue : 3/17/2016

Version : 2.01

Section 16. Other information

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by Sherwin-Williams, including but not limited to the incorporation of non Sherwin-Williams products or the use or addition of products in proportions not specified by Sherwin-Williams. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

MATERIAL SAFETY DATA SHEET

Y24W8020
30 00

DATE OF PREPARATION
Nov 29, 2010

SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER
Y24W8020
PRODUCT NAME
Exterior Oil-Based Wood Primer, Exterior Oil-Based, White
MANUFACTURER'S NAME
THE SHERWIN-WILLIAMS COMPANY
101 Prospect Avenue N.W.
Cleveland, OH 44115

Telephone Numbers and Websites

Product Information	www.sherwin-williams.com
Regulatory Information	(216) 566-2902 www.paintdocs.com
Medical Emergency	(216) 566-2917
Transportation Emergency*	(800) 424-9300
**for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)*	

SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure
19	**64742-88-7**	**Mineral Spirits**		
		ACGIH TLV	100 PPM	2 mm
		OSHA PEL	100 PPM	
3	**64742-88-7**	**Mineral Spirits 140-Flash**		
		ACGIH TLV	100 PPM	0.5 mm
		OSHA PEL	100 PPM	
0.2	**100-41-4**	**Ethylbenzene**		
		ACGIH TLV	100 PPM	7.1 mm
		ACGIH TLV	125 PPM STEL	
		OSHA PEL	100 PPM	
		OSHA PEL	125 PPM STEL	
0.2	**14808-60-7**	**Quartz**		
		ACGIH TLV	0.025 mg/m3 as Resp. Dust	
		OSHA PEL	0.1 mg/m3 as Resp. Dust	
3	**14464-46-1**	**Cristobalite**		
		ACGIH TLV	0.025 mg/m3 as Resp. Dust	
		OSHA PEL	0.05 mg/m3 as Resp. Dust	
4	**12001-26-2**	**Mica**		
		ACGIH TLV	3 mg/m3 as Resp. Dust	
		OSHA PEL	3 mg/m3 as Resp. Dust	
16	**13463-67-7**	**Titanium Dioxide**		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respirable Fraction	

SECTION 3 — HAZARDS IDENTIFICATION

HMIS Codes

Health	2*
Flammability	2
Reactivity	0

ROUTES OF EXPOSURE
INHALATION of vapor or spray mist.
EYE or SKIN contact with the product, vapor or spray mist.
EFFECTS OF OVEREXPOSURE
EYES: Irritation.
SKIN: Prolonged or repeated exposure may cause irritation.
INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.
Prolonged overexposure to hazardous ingredients in Section 2 may cause adverse chronic effects to the following organs or systems:

- the liver
- the urinary system

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.
Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

None generally recognized.

CANCER INFORMATION

For complete discussion of toxicology data refer to Section 11.

SECTION 4 — FIRST AID MEASURES

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.
SKIN: Wash affected area thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
INHALATION: If affected, remove from exposure. Restore breathing. Keep warm and quiet.
INGESTION: Do not induce vomiting. Get medical attention immediately.

SECTION 5 — FIRE FIGHTING MEASURES

FLASH POINT	LEL	UEL	FLAMMABILITY CLASSIFICATION
115 °F PMCC	0.9	6.0	Combustible, Flash above 99 and below 200 °F

EXTINGUISHING MEDIA

Carbon Dioxide, Dry Chemical, Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS

Closed containers may explode when exposed to extreme heat.
Application to hot surfaces requires special precautions.
During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent. Obtain medical attention.

SPECIAL FIRE FIGHTING PROCEDURES

Full protective equipment including self-contained breathing apparatus should be used.
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

SECTION 6 — ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Remove all sources of ignition. Ventilate the area.
Remove with inert absorbent.

SECTION 7 — HANDLING AND STORAGE

STORAGE CATEGORY

DOL Storage Class II

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are COMBUSTIBLE. Keep away from heat and open flame.
Consult NFPA Code. Use approved Bonding and Grounding procedures.
Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

PRECAUTIONS TO BE TAKEN IN USE

Use only with adequate ventilation.
Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.
Wash hands after using.
This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m3 (total dust), 3 mg/m3 (respirable fraction), OSHA PEL 15 mg/m3 (total dust), 5 mg/m3 (respirable fraction).
Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PRECAUTIONS

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT	11.51 lb/gal	1379 g/l
SPECIFIC GRAVITY	1.38	
BOILING POINT	300 - 416 °F	148 - 213 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	41%	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	

VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)

2.66 lb/gal	319 g/l	Less Water and Federally Exempt Solvents
2.66 lb/gal	319 g/l	Emitted VOC

SECTION 10 — STABILITY AND REACTIVITY

STABILITY — Stable

CONDITIONS TO AVOID

None known.

INCOMPATIBILITY

None known.

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

SECTION 11 — TOXICOLOGICAL INFORMATION

CHRONIC HEALTH HAZARDS

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations. There is no evidence that ethylbenzene causes cancer in humans.

Crystalline Silica (Quartz, Cristobalite) is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer.

IARC's Monograph No. 93 reports there is sufficient evidence of carcinogenicity in experimental rats exposed to titanium dioxide but inadequate evidence for carcinogenicity in humans and has assigned a Group 2B rating. In addition, the IARC summary concludes, "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium is bound to other materials, such as paint."

TOXICOLOGY DATA

CAS No.	Ingredient Name				
64742-88-7	**Mineral Spirits**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
64742-88-7	**Mineral Spirits 140-Flash**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
100-41-4	**Ethylbenzene**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		3500 mg/kg
14808-60-7	**Quartz**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
14464-46-1	**Cristobalite**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
12001-26-2	**Mica**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
13463-67-7	**Titanium Dioxide**				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available

SECTION 12 — ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

No data available.

SECTION 13 — DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.
Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.
Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

SECTION 14 — TRANSPORT INFORMATION

US Ground (DOT)

May be Classed as a Combustible Liquid for U.S. Ground.
UN1263, PAINT, 3, PG III, (ERG#128)

DOT (Dept of Transportation) Hazardous Substances & Reportable Quantities

Xylenes (isomers and mixture) 100 lb RQ

Bulk Containers may be Shipped as (check reportable quantities):

UN1263, PAINT, COMBUSTIBLE LIQUID, PG III, (ERG#128)

Canada (TDG)

May be Classed as a Combustible Liquid for Canadian Ground.
UN1263, PAINT, CLASS 3, PG III, (ERG#128)

IMO

UN1263, PAINT, CLASS 3, PG III, (46 C c.c.), EmS F-E, S-E, ADR (D/E)

SECTION 15 — REGULATORY INFORMATION

SARA 313 *(40 CFR 372.65C)* SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
100-41-4	Ethylbenzene	0.1	

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

SECTION 16 — OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

Safety Data Sheet
Spartan Chemical Company, Inc.

Revision Date: 07-Aug-2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name: **SHINELINE FLOOR PREP**
Product Number: 3029
Recommended Use: Neutralizer
Uses Advised Against: For Industrial and Institutional Use Only

Manufacturer/Supplier: Spartan Chemical Company, Inc.
1110 Spartan Drive
Maumee, Ohio 43537 USA
800-537-8990 (Business hours)
www.spartanchemical.com

24 Hour Emergency Phone Numbers:
Medical Emergency/Information: 888-314-6171
Transportation/Spill/Leak: CHEMTREC 800-424-9300

2. HAZARDS IDENTIFICATION

GHS Classification
Skin Corrosion/Irritation: Category 1
Serious Eye Damage/Eye Irritation: Category 1
Corrosive to Metals: Category 1

GHS Label Elements
Signal Word: **Danger**
Symbols:

Hazard Statements: Causes severe skin burns and serious eye damage.
May be corrosive to metals.

Precautionary Statements:
Prevention: Do not breathe mist, vapors or spray.
Wash hands and any exposed skin thoroughly after handling.
Wear protective gloves. Wear eye / face protection. Wear protective clothing.
Keep in original or other corrosion resistant container.
Response: **IMMEDIATELY CALL A POISON CENTER OR PHYSICIAN.**
-Eyes IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
-Skin IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse.
-Inhalation: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
-Ingestion: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
-Specific Treatment: See Safety Data Sheet Section 4: "FIRST AID MEASURES" for additional information.

Spill: Absorb spillage to prevent material damage.
Storage: Store locked up. Store in corrosion resistant container.

Disposal: Dispose of contents and container in accordance with local, state and federal regulations.

Hazards Not Otherwise Classified: Not Applicable

Other Information:
- Corrosive.
- Harmful if swallowed
- Inhalation of vapors or mist may cause respiratory irritation.
- Keep out of reach of children.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
water	7732-18-5	60-100
phosphoric acid	7664-38-2	5-10
alcohol ethoxylate	68439-46-3	1-5

Specific chemical identity and/or exact percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

-Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IMMEDIATELY CALL A POISON CENTER OR PHYSICIAN.

-Skin Contact: Take off immediately all contaminated clothing and shoes. Rinse with water or shower for at least 15 minutes. IMMEDIATELY CALL A POISON CENTER OR PHYSICIAN. Wash contaminated clothing before reuse.

-Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IMMEDIATELY CALL A POISON CENTER OR PHYSICIAN.

-Ingestion: Rinse mouth. Do NOT induce vomiting. IMMEDIATELY CALL A POISON CENTER OR PHYSICIAN. Never give anything by mouth to an unconscious person.

Note to Physicians: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Product does not support combustion, Use extinguishing agent suitable for type of surrounding fire

Specific Hazards Arising from the Chemical: Contact with metals may evolve flammable hydrogen gas. Dried product is capable of burning.

Hazardous Combustion Products: May include Carbon monoxide Carbon dioxide and other toxic gases or vapors.

Protective Equipment and Precautions for Firefighters: Wear MSHA/NIOSH approved self-contained breathing apparatus (SCBA) and full protective gear. Cool fire-exposed containers with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

Environmental Precautions: Do not rinse spill onto the ground, into storm sewers or bodies of water.

Methods for Clean-Up: Prevent further leakage or spillage if safe to do so. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

7. HANDLING AND STORAGE

Advice on Safe Handling: Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

Storage Conditions: Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep from freezing.

Incompatible Materials: Sodium hypochlorite (or other hypochlorites). Strong bases. Reactive metals such as aluminum, zinc and tin.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits: .

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH
phosphoric acid 7664-38-2	STEL: 3 mg/m^3 TWA: 1 mg/m^3	TWA: 1 mg/m^3 (vacated) TWA: 1 mg/m^3 (vacated) STEL: 3 mg/m^3	IDLH: 1000 mg/m^3 TWA: 1 mg/m^3 STEL: 3 mg/m^3

Engineering Controls: Provide good general ventilation.
If work practices generate dust, fumes, gas, vapors or mists which expose workers to chemicals above the occupational exposure limits, local exhaust ventilation or other engineering controls should be considered.
Eye wash stations and shower facilities should be readily accessible in areas where the product is handled.

Personal Protective Equipment

Eye/Face Protection: Wear splash goggles.
Skin and Body Protection: Wear rubber or other chemical-resistant gloves.
Respiratory Protection: Not required with expected use.
If occupational exposure limits are exceeded or respiratory irritation occurs, use of a NIOSH/MSHA approved respirator suitable for the use-conditions and chemicals in Section 3 should be considered.
General Hygiene Considerations: Wash hands and any exposed skin thoroughly after handling.
See 29 CFR 1910.132-138 for further guidance.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Physical State:	Liquid
Color:	Green
Odor:	Orange
pH:	< 1.0
Melting Point / Freezing Point:	No information available.
Boiling Point / Boiling Range:	100 °C / 212 °F
Flash Point:	> 100 °C / > 212 °F ASTM D56
Evaporation Rate:	< 1 (Butyl acetate = 1)
Flammability (solid, gas)	No information available.
Upper Flammability Limit:	No information available.
Lower Flammability Limit:	No information available.
Vapor Pressure:	No information available.
Vapor Density:	No information available.
Specific Gravity:	1.02
Solubility(ies):	Soluble in water
Partition Coefficient:	No information available.
Autoignition Temperature:	No information available.
Decomposition Temperature:	No information available.
Viscosity:	No information available.

10. STABILITY AND REACTIVITY

Reactivity: This material is considered to be non-reactive under normal conditions of use.
Chemical Stability: Stable under normal conditions.
Possibility of Hazardous Reactions: Not expected to occur with normal handling and storage.
Conditions to Avoid: Extremes of temperature and direct sunlight.
Incompatible Materials: Sodium hypochlorite (or other hypochlorites). Strong bases. Reactive metals such as aluminum, zinc and tin.
Hazardous Decomposition Products: May include carbon monoxide, carbon dioxide (CO2) and other toxic gases or vapors.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Eyes, Skin, Ingestion, Inhalation.
Symptoms of Exposure:
-Eye Contact: Pain, redness, swelling of the conjunctiva and tissue damage. Eye contact may cause permanent damage.
-Skin Contact: Pain, redness, blistering and possible chemical burn.
-Inhalation: Nasal discomfort and coughing.
-Ingestion: Damage or chemical burns to mouth, throat and stomach. Pain, nausea, vomiting and diarrhea.
Immediate, Delayed, Chronic Effects
Product Information: Data not available or insufficient for classification.

Target Organ Effects: -Eyes. Respiratory System. -Skin.
Numerical Measures of Toxicity
The following acute toxicity estimates (ATE) are calculated based on the GHS document.
.
ATEmix (oral): 17234 mg/kg
ATEmix (dermal): 29704 mg/kg
ATEmix (inhalation-dust/mist): 2.2 mg/l

Component Acute Toxicity Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
water 7732-18-5	> 90 mL/kg (Rat)	Not Available	Not Available
phosphoric acid 7664-38-2	= 1530 mg/kg (Rat)	= 2730 mg/kg (Rabbit)	> 850 mg/m^3 (Rat) 1 h
alcohol ethoxylate 68439-46-3	= 1378 mg/kg (Rat)	> 2 g/kg (Rabbit)	Not Available

Carcinogenicity: No components present at 0.1% or greater are listed as to being carcinogens by ACGIH, IARC, NTP or OSHA.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/Aquatic Plants	Fish	Toxicity to Microorganisms	Crustacea
phosphoric acid 7664-38-2	Not Available	3 - 3.5: 96 h Gambusia affinis mg/L LC50	Not Available	4.6: 12 h Daphnia magna mg/L EC50

Persistence and Degradability: No information available.
Bioaccumulation: No information available.

Other Adverse Effects: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal of Wastes: Dispose of in accordance with federal, state and local regulations.
Contaminated Packaging: Dispose of in accordance with federal, state and local regulations.
US EPA Waste Number: D002

14. TRANSPORT INFORMATION

DOT:
UN/ID No: UN1760
Proper Shipping Name: Corrosive liquids, n.o.s.,(contains phosphoric acid)
Hazard Class: 8
Packing Group: III

Special Provisions: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Check with a trained hazardous materials transportation expert for information specific to your situation.

IMDG:

UN/ID No:	UN1760
Proper Shipping Name:	Corrosive liquids, n.o.s.,(contains phosphoric acid)
Hazard Class:	8
Packing Group:	III

15. REGULATORY INFORMATION

TSCA Status: (Toxic Substance Control Act Section 8(b) Inventory)
All chemical substances in this product are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

SARA 313
This product does not contain listed substances above the "de minimus" level

SARA 311/312 Hazard Categories

Acute Health Hazard:	Yes
Chronic Health Hazard:	No
Fire Hazard:	No
Sudden release of pressure hazard:	No
Reactive Hazard:	No

California Proposition 65
This product is not subject to warning requirements under California Proposition 65.

16. OTHER INFORMATION

NFPA	**Health Hazards:** 3	**Flammability:** 0	**Instability:** 0	**Special:** N/A
HMIS	**Health Hazards:** 3	**Flammability:** 0	**Physical Hazards:** 0	

Revision Date:	07-Aug-2015
Reasons for Revision:	Section 14 and 15

Disclaimer:
The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Close this window MSDS

Common Name: SHREDDER OIL
Manufacturer: HSM
MSDS Revision Date: 3/20/2003
MSDS Format: No Format Specified

Grainger Item Number(s): 3AED2, 3AED3, 3AED4
Manufacturer Model Number(s):

MSDS Table of Contents

Click the desired link below to jump directly to that section in the MSDS.

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SECTION 11: TOXICOLOGICAL INFORMATION
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HSM(R*)

SHREDDER OIL

MATERIAL SAFETY DATA SHEET

MSDS NO.: 633415001

REVISION DATE: 03/20/2003

IMPORTANT:
READ THIS MSDS BEFORE HANDLING OR DISPOSING OF THIS PRODUCT AND PASS THIS INFORMATION ON TO EMPLOYEES, CUSTOMERS AND USERS OF THIS PRODUCT.

EMERGENCY OVERVIEW:

PHYSICAL STATE: LIQUID.

COLOR: LIGHT AMBER TO AMBER

ODOR: MILD PETROLEUM ODOR

WARNING:
OIL INJECTED INTO THE SKIN FROM HIGH-PRESSURE LEAKS IN HYDRAULIC SYSTEMS CAN CAUSE SEVERE INJURY.
MOST DAMAGE OCCURS DURING THE FIRST FEW HOURS.
SEEK MEDICAL ATTENTION IMMEDIATELY.

SURGICAL REMOVAL OF OIL MAY BE NECESSARY.
SPILLS MAY CREATE A SLIPPING HAZARD.

HAZARD RANKINGS:

	HMIS	NFPA
HEALTH HAZARD	1	0
FIRE HAZARD	1	1
REACTIVITY	0	0

* = CHRONIC HEALTH HAZARD

PROTECTIVE EQUIPMENT:
MINIMUM RECOMMENDED
SEE SECTION 8 FOR DETAILS

SAFETY GLASSES
LAB COAT
GLOVES

SECTION 1: IDENTIFICATION

top

TRADE NAME: SHREDDER OIL

PRODUCT NUMBER: 633415001

CAS NUMBER: MIXTURE.

PRODUCT FAMILY: HYDRAULIC OIL

SYNONYMS:
HYDRAULIC OIL
SREDDER OIL PRODUCT CODE NO.: 633415001

TECHNICAL CONTACT: (800) 248-4684

MEDICAL EMERGENCY: (918) 495-4700

CHEMTREC EMERGENCY (UNITED STATES ONLY): (800) 424-9300

SECTION 2: COMPOSITION

top

COMPONENT NAME(S)	CAS REGISTRY NO.	CONCENTRATION (%)
1) DISTILLATES, PETROLEUM, SOLVENT-REFINED LIGHT PARAFFINIC	64741-89-5	0 - 50
2) DISTILLATES, PETROLEUM, SOLVENT-REFINED HEAVY PARAFFINIC	64741-88-4	0 - 100
3) DISTILLATES, PETROLEUM, HYDROTREATED HEAVY PARAFFINIC	64742-54-7	0 - 100
4) ZINC AND ZINC COMPOUNDS	68649-42-3	0 - 1
5) PROPRIETARY INGREDIENTS	PROPRIETARY MIXTURE	0 - 1

SECTION 3: HAZARDS IDENTIFICATION

top

ALSO SEE EMERGENCY OVERVIEW AND HAZARD RATINGS AT THE BEGINNING OF
THIS MSDS.

MAJOR ROUTE(S) OF ENTRY: SKIN CONTACT.

SIGNS AND SYMPTOMS OF ACUTE EXPOSURE:

INHALATION:
AT ELEVATED TEMPERATURES OR IN ENCLOSED SPACES, PRODUCT MIST OR VAPORS MAY IRRITATE THE MUCOUS MEMBRANES OF THE NOSE, THE THROAT, BRONCHI, AND LUNGS.

EYE CONTACT:
THIS PRODUCT CAN CAUSE TRANSIENT MILD EYE IRRITATION WITH SHORT-TERM CONTACT WITH LIQUID SPRAYS OR MISTS.

SKIN CONTACT:
THIS MATERIAL CAN CAUSE MILD SKIN IRRITATION FROM PROLONGED OR REPEATED SKIN CONTACT. INJECTION UNDER THE SKIN CAN CAUSE INFLAMMATION AND SWELLING. INJECTION OF PRESSURIZED HYDROCARBONS CAN CAUSE SEVERE, PERMANENT TISSUE DAMAGE. INITIAL SYMPTOMS MAY BE MINOR. INJECTION OF PETROLEUM HYDROCARBONS REQUIRES IMMEDIATE MEDICAL ATTENTION.

INGESTION:
IF SWALLOWED, LARGE VOLUMES OF MATERIAL CAN CAUSE GENERALIZED DEPRESSION, HEADACHE, DROWSINESS, NAUSEA, VOMITING AND DIARRHEA. SMALLER DOSES CAN CAUSE A LAXATIVE EFFECT. IF ASPIRATED INTO THE LUNGS, LIQUID CAN CAUSE LUNG DAMAGE.

CHRONIC HEALTH EFFECTS SUMMARY:
CONTAINS A PETROLEUM-BASED MINERAL OIL. PROLONGED OR REPEATED SKIN CONTACT CAN CAUSE MILD IRRITATION AND INFLAMMATION CHARACTERIZED BY DRYING, CRACKING, (DERMATITIS) OR OIL ACNE. REPEATED OR PROLONGED INHALATION OF PETROLEUM-BASED MINERAL OIL MISTS AT CONCENTRATIONS ABOVE APPLICABLE WORKPLACE EXPOSURE LEVELS CAN CAUSE RESPIRATORY IRRITATION OR OTHER PULMONARY EFFECTS.

CONDITIONS AGGRAVATED BY EXPOSURE:
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE TO THIS MATERIAL MAY INCLUDE PRE-EXISTING SKIN DISORDERS.

TARGET ORGANS:
THIS MATERIAL MAY CAUSE DAMAGE TO THE FOLLOWING ORGANS: SKIN.

CARCINOGENIC POTENTIAL:
THIS PRODUCT DOES NOT CONTAIN ANY COMPONENTS AT CONCENTRATIONS ABOVE 0.1% WHICH ARE CONSIDERED CARCINOGENIC BY OSHA, IARC OR NTP.

OSHA HAZARD CLASSIFICATION IS INDICATED BY AN "X" IN THE BOX ADJACENT TO THE HAZARD TITLE. IF NO "X" IS PRESENT, THE PRODUCT DOES NOT EXHIBIT THE HAZARD AS DEFINED IN THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200).

OSHA HEALTH HAZARD CLASSIFICATION:
IRRITANT ( )
SENSITIZER ( )
CORROSIVE ( )
TOXIC ( )
HIGHLY TOXIC ( )
CARCINOGENIC ( )

OSHA PHYSICAL HAZARD CLASSIFICATION:
COMBUSTIBLE ( )
FLAMMABLE ( )
COMPRESSED GAS ( )
EXPLOSIVE ( )
OXIDIZER ( )
ORGANIC PEROXIDE ( )
PYROPHORIC ( )
WATER-REACTIVE ( )
UNSTABLE ( )

SECTION 4: FIRST AID MEASURES

top

TAKE PROPER PRECAUTIONS TO ENSURE YOUR OWN HEALTH AND SAFETY BEFORE ATTEMPTING RESCUE OR PROVIDING FIRST AID. FOR MORE SPECIFIC INFORMATION, REFER TO EXPOSURE CONTROLS AND PERSONAL PROTECTION IN SECTION 8 OF THIS MSDS.

INHALATION:
MOVE VICTIM TO FRESH AIR. IF VICTIM IS NOT BREATHING, IMMEDIATELY BEGIN RESCUE BREATHING. IF BREATHING IS DIFFICULT, 100 PERCENT HUMIDIFIED OXYGEN SHOULD BE ADMINISTERED BY A QUALIFIED INDIVIDUAL. SEEK MEDICAL ATTENTION IMMEDIATELY. KEEP THE AFFECTED INDIVIDUAL WARM AND AT REST.

EYE CONTACT:
CHECK FOR AND REMOVE CONTACT LENSES. FLUSH EYES WITH COOL, CLEAN, LOW-PRESSURE WATER WHILE OCCASIONALLY LIFTING AND LOWERING EYELIDS. SEEK MEDICAL ATTENTION IF EXCESSIVE TEARING, REDNESS, OR PAIN PERSISTS.

SKIN CONTACT:
IF BURNED BY HOT MATERIAL, COOL SKIN BY QUENCHING WITH LARGE AMOUNTS OF COOL WATER. FOR CONTACT WITH PRODUCT AT AMBIENT TEMPERATURES, REMOVE CONTAMINATED SHOES AND CLOTHING. WIPE OFF EXCESS MATERIAL. WASH EXPOSED SKIN WITH MILD SOAP AND WATER. SEEK MEDICAL ATTENTION IF TISSUE APPEARS DAMAGED OR IF PAIN OR IRRITATION PERSISTS. THOROUGHLY CLEAN CONTAMINATED CLOTHING BEFORE REUSE. DISCARD CONTAMINATED LEATHER GOODS. IF MATERIAL IS INJECTED UNDER THE SKIN, SEEK MEDICAL ATTENTION IMMEDIATELY.

INGESTION:
DO NOT INDUCE VOMITING UNLESS DIRECTED TO BY A PHYSICIAN. DO NOT GIVE ANYTHING TO DRINK UNLESS DIRECTED TO BY A PHYSICIAN. NEVER GIVE ANYTHING BY MOUTH TO A PERSON WHO IS NOT FULLY CONSCIOUS. SEEK MEDICAL ATTENTION IMMEDIATELY.

NOTES TO PHYSICIAN:
IN THE EVENT OF INJECTION IN UNDERLYING TISSUE, IMMEDIATE TREATMENT SHOULD INCLUDE EXTENSIVE INCISION, DEBRIDEMENT AND SALINE IRRIGATION. INADEQUATE TREATMENT CAN RESULT IN ISCHEMIA AND GANGRENE. EARLY SYMPTOMS MAY BE MINIMAL.

SECTION 5: FIRE FIGHTING MEASURES

top

NFPA FLAMMABILITY CLASSIFICATION: NFPA CLASS-IIIB COMBUSTIBLE MATERIAL.

FLASH POINT METHOD:
OPEN CUP: 212 DEG. C (414 DEG. F) (CLEVELAND.).

LOWER FLAMMABLE LIMIT: NO DATA.
UPPER FLAMMABLE LIMIT: NO DATA.

AUTOIGNITION TEMPERATURE: NOT AVAILABLE.

HAZARDOUS COMBUSTION PRODUCTS:
CARBON DIOXIDE, CARBON MONOXIDE, SMOKE, FUMES, UNBURNED HYDROCARBONS AND TRACE OXIDES OF SULFUR, PHOSPHORUS, ZINC AND/OR NITROGEN.

SPECIAL PROPERTIES:
THIS MATERIAL CAN BURN BUT WILL NOT READILY IGNITE. THIS MATERIAL WILL RELEASE VAPORS WHEN HEATED ABOVE THE FLASH POINT TEMPERATURE THAT CAN IGNITE WHEN EXPOSED TO A SOURCE OF IGNITION. IN ENCLOSED SPACES, HEATED VAPOR CAN IGNITE WITH EXPLOSIVE FORCE. MISTS OR SPRAYS MAY BURN AT TEMPERATURES BELOW THE FLASH POINT.

EXTINGUISHING MEDIA: USE DRY CHEMICAL, FOAM, CARBON DIOXIDE OR WATER FOG.

PROTECTION OF FIRE FIGHTERS:
FIREFIGHTERS MUST USE FULL BUNKER GEAR INCLUDING NIOSH-APPROVED POSITIVE

PRESSURE SELF-CONTAINED BREATHING APPARATUS TO PROTECT AGAINST POTENTIAL HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS AND OXYGEN DEFICIENCIES.

SECTION 6: ACCIDENTAL RELEASE MEASURES

top

TAKE PROPER PRECAUTIONS TO ENSURE YOUR OWN HEALTH AND SAFETY BEFORE ATTEMPTING SPILL CONTROL OR CLEAN-UP. FOR MORE SPECIFIC INFORMATION, REFER TO THE EMERGENCY OVERVIEW AT THE BEGINNING OF THIS MSDS, EXPOSURE CONTROLS AND PERSONAL PROTECTION IN SECTION 8 AND DISPOSAL CONSIDERATIONS IN SECTION 13 OF THIS MSDS.

DO NOT TOUCH DAMAGED CONTAINERS OR SPILLED MATERIAL UNLESS WEARING APPROPRIATE PROTECTIVE EQUIPMENT. SLIPPING HAZARD; DO NOT WALK THROUGH SPILLED MATERIAL. STOP LEAK IF YOU CAN DO SO WITHOUT RISK. FOR SMALL SPILLS, ABSORB OR COVER WITH DRY EARTH, SAND, OR OTHER INERT NON-COMBUSTIBLE ABSORBENT MATERIAL AND PLACE INTO WASTE CONTAINERS FOR LATER DISPOSAL. CONTAIN LARGE SPILLS TO MAXIMIZE PRODUCT RECOVERY OR DISPOSAL. PREVENT ENTRY INTO WATERWAYS OR SEWERS. IN URBAN AREA, CLEANUP SPILL AS SOON AS POSSIBLE. IN NATURAL ENVIRONMENTS, SEEK CLEANUP ADVICE FROM SPECIALISTS TO MINIMIZE PHYSICAL HABITAT DAMAGE. THIS MATERIAL WILL FLOAT ON WATER. ABSORBENT PADS AND SIMILAR MATERIALS CAN BE USED. COMPLY WITH ALL LAWS AND REGULATION

SECTION 7: HANDLING AND STORAGE

top

HANDLING:
AVOID CONTAMINATION AND EXTREME TEMPERATURES TO MINIMIZE PRODUCT DEGRADATION. EMPTY CONTAINERS MAY CONTAIN PRODUCT RESIDUES THAT CAN IGNITE WITH EXPLOSIVE FORCE. DO NOT PRESSURIZE, CUT, WELD, BRAZE SOLDER, DRILL, GRIND OR EXPOSE CONTAINERS TO FLAMES, SPARKS, HEAT OR OTHER POTENTIAL IGNITION SOURCES. CONSULT APPROPRIATE FEDERAL, STATE AND LOCAL AUTHORITIES BEFORE REUSING, RECONDITIONING, RECLAIMING, RECYCLING OR DISPOSING OF EMPTY CONTAINERS AND/OR WASTE RESIDUES OF THIS PRODUCT.

STORAGE:
KEEP CONTAINER CLOSED. DO NOT STORE WITH STRONG OXIDIZING AGENTS. DO NOT STORE AT ELEVATED TEMPERATURES. AVOID STORING PRODUCT IN DIRECT SUNLIGHT FOR EXTENDED PERIODS OF TIME. CONSULT APPROPRIATE FEDERAL, STATE AND LOCAL AUTHORITIES BEFORE REUSING, RECONDITIONING, RECLAIMING, RECYCLING OR DISPOSING OF EMPTY CONTAINERS OR WASTE RESIDUES OF THIS PRODUCT.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

top

ENGINEERING CONTROLS:
PROVIDE EXHAUST VENTILATION OR OTHER ENGINEERING CONTROLS TO KEEP THE AIRBORNE CONCENTRATIONS OF MISTS AND/OR VAPORS BELOW THE RECOMMENDED EXPOSURE LIMITS (SEE BELOW). AN EYE WASH STATION AND SAFETY SHOWER SHOULD BE LOCATED NEAR THE WORK-STATION.

PERSONAL PROTECTIVE EQUIPMENT:
PERSONAL PROTECTIVE EQUIPMENT SHOULD BE SELECTED BASED UPON THE CONDITIONS UNDER WHICH THIS MATERIAL IS USED. A HAZARD ASSESSMENT OF THE WORK AREA FOR PPE REQUIREMENTS SHOULD BE CONDUCTED BY A QUALIFIED PROFESSIONAL PURSUANT TO OSHA REGULATIONS. THE FOLLOWING PICTOGRAMS REPRESENT THE MINIMUM REQUIREMENTS FOR PERSONAL PROTECTIVE EQUIPMENT. FOR CERTAIN OPERATIONS, ADDITIONAL PPE MAY BE REQUIRED.

SAFETY GLASSES
LAB COAT
GLOVES

EYE PROTECTION:

SAFETY GLASSES EQUIPPED WITH SIDE SHIELDS ARE RECOMMENDED AS MINIMUM PROTECTION IN INDUSTRIAL SETTINGS. WEAR GOGGLES AND/OR FACE SHIELD IF SPLASHING OR SPRAYING IS ANTICIPATED. WEAR GOGGLES AND FACE SHIELD IF MATERIAL IS HEATED ABOVE 125 DEG. F (51 DEG. C). HAVE SUITABLE EYE WASH WATER AVAILABLE.

HAND PROTECTION:
USE GLOVES CONSTRUCTED OF CHEMICAL RESISTANT MATERIALS SUCH AS NEOPRENE OR HEAVY NITRILE RUBBER IF FREQUENT OR PROLONGED CONTACT IS EXPECTED. USE HEAT-PROTECTIVE GLOVES WHEN HANDLING PRODUCT AT ELEVATED TEMPERATURES.

BODY PROTECTION:
USE CLEAN AND IMPERVIOUS PROTECTIVE CLOTHING (E.G., NEOPRENE OR TYVEK(R*)) IF SPLASHING OR SPRAYING CONDITIONS ARE PRESENT. PROTECTIVE CLOTHING MAY INCLUDE LONG-SLEEVE OUTER GARMENT, APRON, OR LAB COAT. IF SIGNIFICANT CONTACT OCCURS, REMOVE OIL-CONTAMINATED CLOTHING AS SOON AS POSSIBLE AND PROMPTLY SHOWER. LAUNDER CONTAMINATED BEFORE REUSE OR DISCARD. WEAR HEAT PROTECTIVE BOOTS AND PROTECTIVE CLOTHING WHEN HANDLING MATERIAL AT ELEVATED TEMPERATURES.

RESPIRATORY PROTECTION:
VAPORIZATION IS NOT EXPECTED AT AMBIENT TEMPERATURES. THEREFORE, THE NEED FOR RESPIRATORY PROTECTION IS NOT ANTICIPATED UNDER NORMAL USE CONDITIONS AND WITH ADEQUATE VENTILATION. IF ELEVATED AIRBORNE CONCENTRATIONS ABOVE APPLICABLE WORKPLACE EXPOSURE LEVELS ARE ANTICIPATED, A NIOSH-APPROVED ORGANIC VAPOR RESPIRATOR EQUIPPED WITH A DUST/MIST PREFILTER SHOULD BE USED. PROTECTION FACTORS VARY DEPENDING UPON THE TYPE OF RESPIRATOR USED. RESPIRATORS SHOULD BE USED IN ACCORDANCE WITH OSHA REQUIREMENTS (29 CFR 1910.134).

GENERAL COMMENTS:
USE GOOD PERSONAL HYGIENE PRACTICES. WASH HANDS AND OTHER EXPOSED SKIN AREAS WITH PLENTY OF MILD SOAP AND WATER BEFORE EATING, DRINKING, SMOKING, USE OF TOILET FACILITIES, OR LEAVING WORK. DO NOT USE GASOLINE, KEROSENE, SOLVENTS OR HARSH ABRASIVES AS SKIN CLEANERS. SINCE SPECIFIC EXPOSURE STANDARDS/CONTROL LIMITS HAVE NOT BEEN ESTABLISHED FOR THIS PRODUCT, THE "OIL MIST, MINERAL" EXPOSURE LIMITS SHOWN BELOW ARE SUGGESTED AS MINIMUM CONTROL GUIDELINES.

OCCUPATIONAL EXPOSURE GUIDELINES:

SUBSTANCE	APPLICABLE WORKPLACE EXPOSURE LEVELS
1) OIL MIST, MINERAL	ACGIH (UNITED STATES). TWA: 5 MG/M3 STEL: 10 MG/M3 OSHA (UNITED STATES). TWA: 5 MG/M3

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (TYPICAL)

top

PHYSICAL STATE: LIQUID.

COLOR: LIGHT AMBER TO AMBER

ODOR: MILD PETROLEUM ODOR

SPECIFIC GRAVITY: 0.87 (WATER = 1)

pH: NOT APPLICABLE.

VAPOR DENSITY: >1 (AIR = 1)

BOILING RANGE: NOT AVAILABLE.

MELTING/FREEZING POINT: NOT AVAILABLE.

VAPOR PRESSURE: <0.001 KPA (<0.01 MMHg) (AT 20 DEG. C)

VISCOSITY (CST @ 40 DEG. C): 33

SOLUBILITY IN WATER: INSOLUBLE IN COLD WATER.

VOLATILE CHARACTERISTICS: NEGLIGIBLE VOLATILITY

ADDITIONAL PROPERTIES:
GRAVITY, DEG. API (ASTM D287): 31.3 @ 60 DEG. F
DENSITY: 7.42 LBS/GAL.
VISCOSITY (ASTM D2161): 170 SUS @ 100 DEG. F

SECTION 10: STABILITY AND REACTIVITY

top

CHEMICAL STABILITY: STABLE.

HAZARDOUS POLYMERIZATION: NOT EXPECTED TO OCCUR.

CONDITIONS TO AVOID:
KEEP AWAY FROM EXTREME HEAT, SPARKS, OPEN FLAME, AND STRONGLY OXIDIZING CONDITIONS.

MATERIALS INCOMPATIBILITY: STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS:
NO ADDITIONAL HAZARDOUS DECOMPOSITION PRODUCTS WERE IDENTIFIED OTHER THAN THE COMBUSTION PRODUCTS IDENTIFIED IN SECTION 5 OF THIS MSDS.

SECTION 11: TOXICOLOGICAL INFORMATION

top

FOR OTHER HEALTH-RELATED INFORMATION, REFER TO THE EMERGENCY OVERVIEW AT THE BEGINNING OF THIS MSDS AND THE HAZARDS IDENTIFICATION IN SECTION 3 OF THIS MSDS.

TOXICITY DATA:

DISTILLATES, PETROLEUM, SOLVENT-REFINED LIGHT PARAFFINIC:

ORAL (LD50):
ACUTE: >5000 MG/KG (RAT).

DERMAL (LD50):
ACUTE: >2000 MG/KG (RABBIT).

DISTILLATES, PETROLEUM, SOLVENT-REFINED HEAVY PARAFFINIC:

ORAL (LD50):
ACUTE: >5000 MG/KG (RAT).

DERMAL (LD50):
ACUTE: >2000 MG/KG (RABBIT).

DISTILLATES, PETROLEUM, HYDROTREATED HEAVY PARAFFINIC:

ORAL (LD50):
ACUTE: >5000 MG/KG (RAT).

DERMAL (LD50):
ACUTE: >2000 MG/KG (RABBIT).

DISTILLATES, PETROLEUM, SOLVENT-REFINED LIGHT PARAFFINIC:
MINERAL OIL MISTS DERIVED FROM HIGHLY REFINED OILS ARE REPORTED TO HAVE LOW ACUTE AND SUB-ACUTE TOXICITIES IN ANIMALS. EFFECTS FROM SINGLE AND

SHORT-TERM REPEATED EXPOSURES TO HIGH CONCENTRATIONS OF MINERAL OIL MISTS WELL ABOVE APPLICABLE WORKPLACE EXPOSURE LEVELS INCLUDE LUNG INFLAMMATORY REACTION, LIPOID GRANULOMA FORMATION AND LIPOID PNEUMONIA. IN ACUTE AND SUB-ACUTE STUDIES INVOLVING EXPOSURES TO LOWER CONCENTRATIONS OF MINERAL OIL MISTS AT OR NEAR CURRENT WORK PLACE EXPOSURE LEVELS PRODUCED NO SIGNIFICANT TOXICOLOGICAL EFFECTS. IN LONG TERM STUDIES (UP TO TWO YEARS) NO CARCINOGENIC EFFECTS HAVE BEEN REPORTED IN ANY ANIMAL SPECIES TESTED.

DISTILLATES, PETROLEUM, SOLVENT-REFINED HEAVY PARAFFINIC:
MINERAL OIL MISTS DERIVED FROM HIGHLY REFINED OILS ARE REPORTED TO HAVE LOW ACUTE AND SUB-ACUTE TOXICITIES IN ANIMALS. EFFECTS FROM SINGLE AND SHORT-TERM REPEATED EXPOSURES TO HIGH CONCENTRATIONS OF MINERAL OIL MISTS WELL ABOVE APPLICABLE WORKPLACE EXPOSURE LEVELS INCLUDE LUNG INFLAMMATORY REACTION, LIPOID GRANULOMA FORMATION AND LIPOID PNEUMONIA. IN ACUTE AND SUB-ACUTE STUDIES INVOLVING EXPOSURES TO LOWER CONCENTRATIONS OF MINERAL OIL MISTS AT OR NEAR CURRENT WORK PLACE EXPOSURE LEVELS PRODUCED NO SIGNIFICANT TOXICOLOGICAL EFFECTS. IN LONG TERM STUDIES (UP TO TWO YEARS) NO CARCINOGENIC EFFECTS HAVE BEEN REPORTED IN ANY ANIMAL SPECIES TESTED. ANALYSES CONDUCTED BY METHOD IP 346 INDICATE THAT THE POLYCYCLIC AROMATIC CONCENTRATION OF THIS MINERAL OIL IS BELOW 3.0 WEIGHT PERCENT.

DISTILLATES, PETROLEUM, HYDROTREATED HEAVY PARAFFINIC:
MINERAL OIL MISTS DERIVED FROM HIGHLY REFINED OILS ARE REPORTED TO HAVE LOW ACUTE AND SUB-ACUTE TOXICITIES IN ANIMALS. EFFECTS FROM SINGLE AND SHORT-TERM REPEATED EXPOSURES TO HIGH CONCENTRATIONS OF MINERAL OIL MISTS WELL ABOVE APPLICABLE WORKPLACE EXPOSURE LEVELS INCLUDE LUNG INFLAMMATORY REACTION, LIPOID GRANULOMA FORMATION AND LIPOID PNEUMONIA. IN ACUTE AND SUB-ACUTE STUDIES INVOLVING EXPOSURES TO LOWER CONCENTRATIONS OF MINERAL OIL MISTS AT OR NEAR CURRENT WORK PLACE EXPOSURE LEVELS PRODUCED NO SIGNIFICANT TOXICOLOGICAL EFFECTS. IN LONG TERM STUDIES (UP TO TWO YEARS) NO CARCINOGENIC EFFECTS HAVE BEEN REPORTED IN ANY ANIMAL SPECIES TESTED.

HYDRAULIC OIL:
REPEATED OR PROLONGED SKIN CONTACT WITH CERTAIN HYDRAULIC OILS CAN CAUSE MILD SKIN IRRITATION CHARACTERIZED BY DRYING, CRACKING (DERMATITIS) OR OIL ACNE. INJECTION UNDER THE SKIN, IN MUSCLE OR INTO THE BLOOD STREAM CAN CAUSE IRRITATION, INFLAMMATION, SWELLING, FEVER, AND SYSTEMIC EFFECTS, INCLUDING MILD CENTRAL NERVOUS SYSTEM DEPRESSION. INJECTION OF PRESSURIZED HYDROCARBONS CAN CAUSE SEVERE, PERMANENT TISSUE DAMAGE.

SECTION 12: ECOLOGICAL INFORMATION

top

ECOTOXICITY:
ANALYSIS FOR ECOLOGICAL EFFECTS HAS NOT BEEN CONDUCTED ON THIS PRODUCT. HOWEVER, IF SPILLED, THIS PRODUCT AND ANY CONTAMINATED SOIL OR WATER MAY BE HARMFUL TO HUMAN, ANIMAL, AND AQUATIC LIFE. ALSO, THE COATING ACTION ASSOCIATED WITH PETROLEUM AND PETROLEUM PRODUCTS CAN BE HARMFUL OR FATAL TO AQUATIC LIFE AND WATERFOWL.

ENVIRONMENTAL FATE:
AN ENVIRONMENTAL FATE ANALYSIS HAS NOT BEEN CONDUCTED ON THIS SPECIFIC PRODUCT. PLANTS AND ANIMALS MAY EXPERIENCE HARMFUL OR FATAL EFFECTS WHEN COATED WITH PETROLEUM-BASED PRODUCTS. PETROLEUM-BASED (MINERAL) LUBE OILS WILL NORMALLY FLOAT ON WATER. IN STAGNANT OR SLOW-FLOWING WATERWAYS, AN OIL LAYER CAN COVER A LARGE SURFACE AREA. AS A RESULT, THIS OIL LAYER MIGHT LIMIT OR ELIMINATE NATURAL ATMOSPHERIC OXYGEN TRANSPORT INTO THE WATER. WITH TIME, IF NOT REMOVED, OXYGEN DEPLETION IN THE WATERWAY CAN RESULT IN A LOSS OF MARINE LIFE OR CREATE AN ANAEROBIC ENVIRONMENT. THIS MATERIAL CONTAINS PHOSPHORUS WHICH IS A CONTROLLED ELEMENT FOR DISPOSAL IN EFFLUENT WATERS IN MOST SECTIONS OF NORTH AMERICA. PHOSPHORUS IS KNOWN TO ENHANCE THE FORMATION OF ALGAE. SEVERE ALGAE GROWTH CAN REDUCE OXYGEN CONTENT IN THE WATER POSSIBLY BELOW LEVELS NECESSARY TO SUPPORT MARINE LIFE.

SECTION 13: DISPOSAL CONSIDERATIONS

top

HAZARD CHARACTERISTIC AND REGULATORY WASTE STREAM CLASSIFICATION CAN CHANGE WITH PRODUCT USE. ACCORDINGLY, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE PROPER STORAGE, TRANSPORTATION, TREATMENT AND/OR DISPOSAL METHODOLOGIES FOR SPENT MATERIALS AND RESIDUES AT THE TIME OF DISPOSITION.

CONDITIONS OF USE MAY CAUSE THIS MATERIAL TO BECOME A "HAZARDOUS WASTE", AS DEFINED BY FEDERAL OR STATE REGULATIONS. IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE IF THE MATERIAL IS A "HAZARDOUS WASTE" AT THE TIME OF DISPOSAL. TRANSPORTATION, TREATMENT, STORAGE, AND DISPOSAL OF WASTE MATERIAL MUST BE CONDUCTED IN ACCORDANCE WITH RCRA REGULATIONS (SEE 40 CFR 260 THROUGH 40 CFR 271). STATE AND/OR LOCAL REGULATIONS MAY BE MORE RESTRICTIVE. CONTACT THE RCRA/SUPERFUND HOTLINE AT (800) 424-9346 OR YOUR REGIONAL US EPA OFFICE FOR GUIDANCE CONCERNING CASE SPECIFIC DISPOSAL ISSUES. EMPTY DRUMS AND PAILS RETAIN RESIDUE. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE THIS PRODUCT'S EMPTY CONTAINER TO HEAT, FLAME, OR OTHER IGNITION SOURCES. DO NOT ATTEMPT TO CLEAN IT. EMPTY DRUMS AND PAILS SHOULD BE DRAINED COMPLETELY, PROPERLY BUNGED OR SEALED, AND PROMPTLY SENT TO A RECONDITIONER.

SECTION 14: TRANSPORT INFORMATION

top

THE SHIPPING DESCRIPTION BELOW MAY NOT REPRESENT REQUIREMENTS FOR ALL MODES OF TRANSPORTATION, SHIPPING METHODS OR LOCATIONS OUTSIDE OF THE UNITED STATES.

US DOT STATUS:
NOT REGULATED BY THE U.S. DEPARTMENT OF TRANSPORTATION AS A HAZARDOUS MATERIAL.

PROPER SHIPPING NAME: NOT REGULATED.

HAZARD CLASS: NOT REGULATED.

PACKING GROUP(S): NOT APPLICABLE.

UN/NA ID: NOT REGULATED.

REPORTABLE QUANTITY:
A REPORTABLE QUANTITY (RQ) HAS NOT BEEN ESTABLISHED FOR THIS MATERIAL.

PLACARDS: NO PLACARD REQUIRED

EMERGENCY RESPONSE GUIDE NO.: NOT APPLICABLE.

HAZMAT STCC NO.: 2911415

MARPOL III STATUS: NOT A DOT "MARINE POLLUTANT" PER 49 CFR 171.8.

SECTION 15: REGULATORY INFORMATION

top

TSCA INVENTORY:
THIS PRODUCT AND/OR ITS COMPONENTS ARE LISTED ON THE TOXIC SUBSTANCES CONTROL ACT (TSCA) INVENTORY.

SARA 302/304:
THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III REQUIRES FACILITIES SUBJECT TO SUBPARTS 302 AND 304 TO SUBMIT EMERGENCY PLANNING AND NOTIFICATION INFORMATION BASED ON THRESHOLD PLANNING QUANTITIES (TPQS) AND REPORTABLE QUANTITIES (RQS) FOR "EXTREMELY HAZARDOUS SUBSTANCES" LISTED IN 40 CFR 302.4 AND 40 CFR 355. NO COMPONENTS WERE IDENTIFIED.

SARA 311/312:
THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III REQUIRES FACILITIES SUBJECT TO THIS SUBPART TO SUBMIT AGGREGATE INFORMATION

ON CHEMICALS BY "HAZARD CATEGORY" AS DEFINED IN 40 CFR 370.2.
THIS MATERIAL WOULD BE CLASSIFIED UNDER THE FOLLOWING HAZARD CATEGORIES:
NO SARA 311/312 HAZARD CATEGORIES IDENTIFIED.

SARA 313:
THIS PRODUCT CONTAINS THE FOLLOWING COMPONENTS IN CONCENTRATIONS ABOVE DE MINIMIS LEVELS THAT ARE LISTED AS TOXIC CHEMICALS IN 40 CFR PART 372 PURSUANT TO THE REQUIREMENTS OF SECTION 313 OF SARA:
NO COMPONENTS WERE IDENTIFIED.

CERCLA:
THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 (CERCLA) REQUIRES NOTIFICATION OF THE NATIONAL RESPONSE CENTER CONCERNING RELEASE OF QUANTITIES OF "HAZARDOUS SUBSTANCES" EQUAL TO OR GREATER THAN THE REPORTABLE QUANTITIES (RQ'S) LISTED IN 40 CFR 302.4. AS DEFINED BY CERCLA, THE TERM "HAZARDOUS SUBSTANCE" DOES NOT INCLUDE PETROLEUM, INCLUDING CRUDE OIL OR ANY FRACTION THEREOF WHICH IS NOT OTHERWISE SPECIFICALLY DESIGNATED IN 40 CFR 302.4. CHEMICAL SUBSTANCES PRESENT IN THIS PRODUCT OR REFINERY STREAM THAT MAY BE SUBJECT TO THIS STATUTE ARE:
ZINC AND ZINC COMPOUNDS, CONCENTRATION: 0-1%

CWA:
THIS MATERIAL IS CLASSIFIED AS AN OIL UNDER SECTION 311 OF THE CLEAN WATER ACT (CWA) AND THE OIL POLLUTION ACT OF 1990 (OPA). DISCHARGES OR SPILLS WHICH PRODUCE A VISIBLE SHEEN ON WATERS OF THE UNITED STATES, THEIR ADJOINING SHORELINES, OR INTO CONDUITS LEADING TO SURFACE WATERS MUST BE REPORTED TO THE EPA'S NATIONAL RESPONSE CENTER AT (800) 424-8802.

CALIFORNIA PROPOSITION 65:
THIS MATERIAL MAY CONTAIN THE FOLLOWING COMPONENTS WHICH ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM, AND MAY BE SUBJECT TO THE REQUIREMENTS OF CALIFORNIA PROPOSITION 65 (CA HEALTH & SAFETY CODE SECTION 25249.5):
TOLUENE: 0.0009%
PROPYLENE OXIDE: 0.0001%
ETHYL ACRYLATE: 0.0002%

NEW JERSEY RIGHT-TO-KNOW LABEL: PETROLEUM OIL (HYDRAULIC OIL)

ADDITIONAL REGULATORY REMARKS: NO ADDITIONAL REGULATORY REMARKS.

SECTION 16: OTHER INFORMATION

top

REFER AT THE BEGINNING OF THIS MSDS FOR THE HMIS AND NFPA HAZARD RATINGS FOR THIS PRODUCT.

REVISION INFORMATION:

VERSION NUMBER: 4.0

REVISION DATE: 03/20/2003

PRINT DATE:
PRINTED ON: 03/20/2003.

ABBREVIATIONS:
AP: APPROXIMATELY
EQ: EQUAL
>: GREATER THAN
<: LESS THAN
NA: NOT APPLICABLE
ND: NO DATA
NE: NOT ESTABLISHED
ACGIH: AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
AIHA: AMERICAN INDUSTRIAL HYGIENE ASSOCIATION
IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

NTP: NATIONAL TOXICOLOGY PROGRAM
NIOSH: NATIONAL INSTITUTE OF OCCUPATIONAL SAFETY AND HEALTH
OSHA: OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
NPCA: NATIONAL PAINT AND COATING MANUFACTURERS ASSOCIATION
HMIS: HAZARDOUS MATERIALS INFORMATION SYSTEM
NFPA: NATIONAL FIRE PROTECTION ASSOCIATION
EPA: US ENVIRONMENTAL PROTECTION AGENCY

DISCLAIMER OF LIABILITY:
THE INFORMATION IN THIS MSDS WAS OBTAINED FROM SOURCES WHICH WE BELIEVE ARE RELIABLE. HOWEVER, THE INFORMATION IS PROVIDED WITHOUT ANY WARRANTY, EXPRESSED OR IMPLIED REGARDING ITS CORRECTNESS. SOME INFORMATION PRESENTED AND CONCLUSIONS DRAWN HEREIN ARE FROM SOURCES OTHER THAN DIRECT TEST DATA ON THE SUBSTANCE ITSELF. THIS MSDS WAS PREPARED AND IS TO BE USED ONLY FOR THIS PRODUCT. IF THE PRODUCT IS USED AS A COMPONENT IN ANOTHER PRODUCT, THIS MSDS INFORMATION MAY NOT BE APPLICABLE. USERS SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY OF THE INFORMATION OR PRODUCTS FOR THEIR PARTICULAR PURPOSE.

THE CONDITIONS OR METHODS OF HANDLING, STORAGE, USE, AND DISPOSAL OF THE PRODUCT ARE BEYOND OUR CONTROL AND MAY BE BEYOND OUR KNOWLEDGE. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH HANDLING, STORAGE, USE OR DISPOSAL OF THE PRODUCT.

MATERIAL SAFETY DATA SHEET

SIKALATEX R

HMIS

HEALTH	1
FLAMMABILITY	0
REACTIVITY	0
PERSONAL PROTECTION	B

1. Product And Company Identification

Supplier
SIKA CORPORATION
201 Polito Ave
Lyndhurst, NJ 07071

Company Contact: Kristin Kelley
Telephone Number: (201) 933-8800
FAX Number: (201) 933-9379
Web Site: www.sikausa.com

Manufacturer
SIKA CORPORATION
201 Polito Ave
Lyndhurst, NJ 07071

Company Contact: Kristin Kelley
Telephone Number: (201) 933-8800
FAX Number: (201) 933-9379
Web Site: www.sikausa.com

Supplier Emergency Contacts & Phone Number
CHEMTREC: 800-424-9300
INTERNATIONAL: 703-527-3887

Manufacturer Emergency Contacts & Phone Number
CHEMTREC: 800-424-9300
INTERNATIONAL: 703-527-3887

Issue Date: 04/18/2001

Product Name: SIKALATEX R
CAS Number: Not Established
Chemical Family: ACRYLIC AQUEOUS EMULSION
MSDS Number: 2310
Product Code: 0747-130

Synonyms
SIKALATEX
SIKATOP 144 "A"
SIKATOP SEAL 107 "A"

2. Composition/Information On Ingredients

Ingredient Name	CAS Number		Percent Of Total Weight
ACRYLIC POLYMER	Trade Secre		

3. Hazards Identification

Eye Hazards
MAY CAUSE EYE IRRITATION.

Skin Hazards
MAY CAUSE SKIN IRRITATION.

Ingestion Hazards
MAY CAUSE STOMACH DISCOMFORT.

3. Hazards Identification - Continued

Inhalation Hazards

MAY CAUSE SLIGHT RESPIRATORY IRRITATION.

4. First Aid Measures

Eye

RINSE EYES THOROUGHLY WITH WATER FOR AT LEAST 15 MINUTES. CONSULT PHYSICIAN.

Skin

WASH SKIN THOROUGHLY WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING.
IF SYMPTOMS PERSIST CONSULT PHYSICIAN.

Ingestion

DILUTE WITH WATER. CONSULT PHYSICIAN IF NECESSARY.

Inhalation

REMOVE TO FRESH AIR. IF BREATHING HAS STOPPED, INSTITUTE ARTIFICIAL RESPIRATION. CONSULT WITH PHYSICIAN.

5. Fire Fighting Measures

Flash Point: >200 °F
Autoignition Point: N/AV °F

Fire And Explosion Hazards

MATERIAL CAN SPLATTER ABOVE 100C/212F.

Extinguishing Media

In case of fire, use water spray (fog) foam, dry chemical, or CO2.

Fire Fighting Instructions

Firefighters should wear self-contained breathing apparatus and full protective gear.

6. Accidental Release Measures

WEAR SUITABLE PROTECTIVE EQUIPMENT. CONTAIN SPILL AND COLLECT WITH ABSORBENT MATERIAL AND TRANSFER INTO SUITABLE CONTAINERS. AVOID CONTACT. FLOOR MAY BE SLIPPERY; USE CARE TO AVOID FALLING.

7. Handling And Storage

Handling And Storage Precautions

STORE IN A COOL DRY AREA. KEEP CONTAINERS TIGHTLY CLOSED. AVOID FREEZING.

Work/Hygienic Practices

Wash thoroughly with soap and water after handling.

8. Exposure Controls/Personal Protection

Engineering Controls

Use with adequate general and local exhaust ventilation.

Eye/Face Protection

Safety glasses with side shields or goggles.

8. Exposure Controls/Personal Protection - Continued

Skin Protection

CHEMICAL RESISTANT RUBBER OR PLASTIC GLOVES RECOMMENDED. WEAR LONG SLEEVE SHIRT AND LONG PANTS.

Respiratory Protection

In areas where the P.E.L.s are exceeded, use a properly fitted NIOSH-approved respirator.

Other/General Protection

WASH THOROUGHLY AFTER HANDLING.

Ingredient(s) - Exposure Limits

ACRYLIC POLYMER

OSHA PEL: NOT ESTABLISHED
ACGIH TLV: NOT ESTABLISHED
IARC: NO
NTP: NO

9. Physical And Chemical Properties

Appearance

MILKY WHITE LIQUID

Odor

AMMONIA ODOR

Chemical Type: Pure
Physical State: Liquid
Melting Point: 32 °F 0 °C
Boiling Point: 212 °F 100 °C
Specific Gravity: 1.0-1.2
Percent Volatiles: 71-73water
Packing Density: 1.0-1.2
Vapor Pressure: 17mm Hg at 20C water
Vapor Density: <1 WATER
pH Factor: N/AV
Solubility: N/AV
Evaporation Rate: < 1 WATER

10. Stability And Reactivity

Stability: STABLE
Hazardous Polymerization: WILL NOT OCCUR

Conditions To Avoid (Stability)

AVOID FREEZING

Incompatible Materials

NONE KNOWN

Hazardous Decomposition Products

NONE KNOWN

11. Toxicological Information

Conditions Aggravated By Exposure

NONE KNOWN

12. Ecological Information

No Data Available...

13. Disposal Considerations

Dispose in accordance with applicable federal, state and local government regulations.

14. Transport Information

Proper Shipping Name

NOT REGULATED PER D.O.T.

15. Regulatory Information

U.S. Regulatory Information

All ingredients of this product are listed or are excluded from listing under the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

SARA Section 313 Notification

This product does not contain any ingredients regulated under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 or 40 CFR 372.

16. Other Information

HMIS Rating

Health: 1
Fire: 0
Reactivity: 0
PPE: B

Revision/Preparer Information

MSDS Preparer: Kristin Kelley
This MSDS Supercedes A Previous MSDS Dated: 02/11/2000

Disclaimer

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SIKA CORPORATION

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 685.00

Revision Date: January 16, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Silica Gel

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **N/A**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Silica Gel Synonyms: Amorphous hydrated silica	varies by mesh size	$SiO_2 \cdot xH_2O$	Varies	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Do not allow solid to become airborne. Ventilate area. Wipe up, place in sealed bag or container and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates.
Moisture sensitive material. Keep container tightly closed. Store in a cool dry place within a Flinn Chem-Saf™ bag

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Dry, white or blue granules, fine sized. Odorless.
Soluble: Generally insoluble.

Boiling point: 2230 ^{o}C
Melting point: 1710 ^{o}C
Specific gravity: 2.1

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with hydrogen fluoride or hydrofluoric acid.
Blue indicating silica gel will turn white upon absorption of water.
Shelf life: Good, if kept dry. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Possible irritant
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: January 16, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 687.01

Revision Date: March 25, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Silicon

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

Hazard class: Serious eye damage or irritation (Category 2B). Causes eye irritation (H320).

For silicon powder please see SDS 687.00

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Silicon lump	7440-21-3	Si	28.09	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If eye irritation persists: Get medical advice or attention. **If on skin:** Rinse cautiously with water for several minutes.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Combustible solid. Flammable in powder form.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use class D fire extinguisher or dry sand for extinction.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #1. Store with metals and metal hydrides.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).
Exposure guidelines: (as total dust) PEL 15 mg/m^3 (OSHA)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Gray powder. Odorless.
Soluble: Soluble in a mixture of nitric and hydrofluoric acid.
Insoluble in water.

Boiling point: 3265 ^oC
Melting point: 1414 ^oC
Specific gravity: 2.3296

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizing agents.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 3160 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-130-8), RCRA code D001.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 25, 2014

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MOMENTIVE
performance materials

Material Safety Data Sheet

Version: 1.5
09/04/2007

GE012A 12C-Crtrg (0.730 Lbs-0.331 Kg)
Silicone Construction Sealant

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufactured By:	**Waterford Plant** **260 Hudson River Rd** **Waterford NY 12188**
Revised:	09/04/2007
Preparer:	PRODUCT STEWARDSHIP COMPLIANCE AND STANDARDS
CHEMTREC	1-800-424-9300
Chemical Family/Use:	Sealant
Formula:	Mixture

HMIS

Flammability:	1	Reactivity:	0	Health:	1

NFPA

Flammability:	1	Reactivity:	0	Health:	1

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
WARNING! May be harmful if swallowed, inhaled or absorbed through skin. Irritating to eyes, respiratory system and skin. May cause central nervous system depression.

Form: Solid Color: Translucent Odor: Acetic acid

POTENTIAL HEALTH EFFECTS

INGESTION
May be harmful if swallowed. May cause central nervous system effects. May cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

SKIN
Uncured product contact will irritate lips, gums and tongue. Skin irritation is possible after contact with the uncured product. May be absorbed through skin and produce effects as listed under "Ingestion".

INHALATION
Causes mild respiratory tract irritation. Applies in uncured state. May be harmful if inhaled.

EYES
Eye irritation on contact with the uncured product.

MEDICAL CONDITIONS AGGRAVATED
Pre-existing skin or respiratory diseases.

SUBCHRONIC (TARGET ORGAN)
Skin; Central nervous system

CHRONIC EFFECTS / CARCINOGENICITY

This product or one of its ingredients present at 0.1% or more is NOT listed as a carcinogen or suspected carcinogen by NTP, IARC, or OSHA.

ROUTES OF EXPOSURE

Dermal; Eyes; Inhalation

3. COMPOSITION / INFORMATION ON INGREDIENTS

PRODUCT COMPOSITION	CAS REG NO.	WGT. %
A. HAZARDOUS		
DISTILLATES, PETROLEUM,HYDROTREATED	64742-47-8	10 - 30 %
METHYLTRIACETOXYSILANE	4253-34-3	1 - 5 %
B. NON-HAZARDOUS		
dimethylpolysiloxane	70131-67-8	60 - 90 %
Treated Filler	68611-44-9	5 - 10 %

4. FIRST AID MEASURES

INGESTION

Do not induce vomiting. If victim is conscious, give 1-3 glasses of water to drink. Never give anything by mouth to an unconscious person. Get medical attention if irritation persists.

SKIN

To clean from skin, remove completely with a dry cloth or paper towel, before washing with detergent and water. Get medical attention if irritation persists.

INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration using a barrier device. If breathing is difficult give oxygen. Get medical attention.

EYES

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

NOTE TO PHYSICIAN

Treatment is symptomatic and supportive.

5. FIRE-FIGHTING MEASURES

FLASH POINT:	> 93.3 °C; 200 °F
METHOD:	estimated
IGNITION TEMPERATURE:	Unknown
FLAMMABLE LIMITS IN AIR - LOWER (%):	Not applicable
FLAMMABLE LIMITS IN AIR - UPPER (%):	Not applicable
SENSITIVITY TO MECHANICAL IMPACT:	No

SENSITIVITY TO STATIC DISCHARGE

Sensitivity to static discharge is not expected.

EXTINGUISHING MEDIA

All standard extinguishing agents are suitable.

SPECIAL FIRE FIGHTING PROCEDURES

Firefighters must wear NIOSH/MSHA approved positive pressureself-contained breathing apparatus with full face mask and fullprotective clothing.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Wipe, scrape or soak up in an inert material and put in a container for disposal. Wash walking surfaces with detergent and water to reduce slipping hazard. Wear proper protective equipment as specified in the protective equipment section.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Avoid contact with skin and eyes. Use only in well-ventilated areas. Remove contact lenses before using sealant. Do not handle lenses until all sealant has been cleaned from the fingertips, nails and cuticles. Residual sealant may remain on fingers for several days and transfer to lenses and cause severe eye irritation. Product releases acetic acid during application and curing. Attention: Not for injection into humans.

STORAGE

Store away from heat, sources of ignition, and incompatibles. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS

Eyewash stations; Showers; Use only in well-ventilated areas.

RESPIRATORY PROTECTION

If exposure limits are exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Supplied air respirators may be required for non-routine or emergency situations. Respiratory protection must be provided in accordance with OSHA regulations (see 29CFR 1910.134).

PROTECTIVE GLOVES

Rubber gloves

EYE AND FACE PROTECTION

Safety glasses

OTHER PROTECTIVE EQUIPMENT

Wear suitable protective clothing and eye/face protection.

Exposure Guidelines

Component	CAS RN	Source	Value

Absence of values indicates none found

PEL - OSHA Permissible Exposure Limit; TLV - ACGIH Threshold Limit Value; TWA - Time Weighted Average

OSHA revoked the Final Rule Limits of January 19, 1989 in response to the 11th Circuit Court of Appeals decision (AFL-CIO v. OSHA) effective June 30, 1993. See 29 CFR 1910.1000 (58 FR 35338).

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT - C & F:	Not applicable
VAPOR PRESSURE (20 C) (MM HG):	Not applicable
VAPOR DENSITY (AIR=1):	Not applicable
FREEZING POINT:	Not applicable
MELTING POINT:	Not applicable
PHYSICAL STATE:	Solid
ODOR:	Acetic acid
COLOR:	Translucent
EVAPORATION RATE (BUTYL ACETATE=1):	< 1
SPECIFIC GRAVITY (WATER=1):	ca. 1.04
DENSITY:	ca. 1.04 g/cm3
ACID / ALKALINITY (MEQ/G):	Not applicable
pH:	Not applicable
VOLATILE ORGANIC CONTENT (VOL):	2.8 %(m)
SOLUBILITY IN WATER (20 C):	Insoluble
SOLUBILITY IN ORGANIC SOLVENT (STATE	Toluene

SOLVENT):
VOC EXCL. H2O & EXEMPTS (G/L): 36

10. STABILITY AND REACTIVITY

STABILITY
Stable

HAZARDOUS POLYMERIZATION
Will not occur.

HAZARDOUS THERMAL DECOMPOSITION / COMBUSTION PRODUCTS
Carbon dioxide (CO2); Carbon monoxide; Silicon dioxide.; Formaldehyde; Acetic acid; This product contains methylpolysiloxanes which can generate formaldehyde at approximately 300 degrees Fahrenheit (150'C) and above, in atmospheres which contain oxygen. Formaldehyde is a skin and respiratory sensitizer, eye and throat irritant, acute toxicant, and potential cancer hazard. A MSDS for formaldehyde is available from Momentive.

INCOMPATIBILITY (MATERIALS TO AVOID)
None known.

CONDITIONS TO AVOID
None known.

11. TOXICOLOGICAL INFORMATION

ACUTE ORAL
Remarks: Unknown

ACUTE DERMAL
Remarks: Unknown

ACUTE INHALATION
Remarks: Unknown

OTHER
None.

SENSITIZATION
No data available

SKIN IRRITATION
No data available

EYE IRRITATION
No data available

MUTAGENICITY
Unknown

OTHER EFFECTS OF OVEREXPOSURE
This product contains methylpolysiloxanes which can generate formaldehyde at approximately 300 degrees Fahrenheit (150'C) and above, in atmospheres which contain oxygen. Formaldehyde is a skin and respiratory sensitizer, eye and throat irritant, acute toxicant, and potential cancer hazard. A MSDS for formaldehyde is available from Momentive., Acetic acid released during curing.

12. ECOLOGICAL INFORMATION

ECOTOXICITY

Ecotoxicological data for this product is not available.

DISTRIBUTION
No data available
CHEMICAL FATE
No data available

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD
Disposal should be made in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

Further Information: This product is not regarded as dangerous goods according to the national and international regulations on the transport of dangerous goods.

15. REGULATORY INFORMATION

Inventories

Japan Inventory of Existing & New Chemical Substances (ENCS)	y (Positive listing)
Korea Existing Chemicals Inventory (KECI)	y (Positive listing)
China Inventory of Existing	y (Positive listing)

Chemical Substances		
Australia Inventory of Chemical Substances (AICS)	y (Positive listing)	
TSCA list	y (Positive listing)	On TSCA Inventory
EU list of existing chemical substances	y (Positive listing)	
Canada NDSL Inventory	n (Negative listing)	
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	n (Negative listing)	
Canada DSL Inventory	q (quantity restricted)	

For inventories that are marked as quantity restricted or special cases, please contact Momentive.

US Regulatory Information

SARA (311,312) HAZARD CLASS

Acute Health Hazard; Chronic Health Hazard

SARA (313) CHEMICALS

Canadian Regulatory Information

WHMIS HAZARD CLASS

D2B TOXIC MATERIALS, D2A VERY TOXIC MATERIALS

Other

SCHDLE B/HTSUS: 3214.10 Mastic Based on Rubber

ECCN: EAR99

CALIFORNIA PROPOSITION 65

This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

16. OTHER INFORMATION

OTHER

These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate., C = ceiling limit NEGL = negligible EST = estimated NF = none found NA = not applicable UNKN = unknown NE = none established REC = recommended ND = none determined V = recommended by vendor SKN = skin TS = trade secret R =

recommended MST = mist NT = not tested STEL = short term exposure limit ppm = parts per million ppb = parts per billion By-product= reaction by-product, TSCA inventory status not required under 40 CFR part 720.30(h-2).

MOMENTIVE
performance materials
The science behind the solutions.

Material Safety Data Sheet

Version: 1.4
01/14/2009

GE112A 12C-Crtrg (0.730 Lbs-0.331 Kg) Silicone Rubber Compound

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufactured By:	**Waterford Plant** **260 Hudson River Rd** **Waterford NY 12188**
Revised:	01/14/2009
Preparer:	PRODUCT STEWARDSHIP COMPLIANCE AND STANDARDS
CHEMTREC	1-800-424-9300
Chemical Family/Use:	Sealant
Formula:	Mixture

HMIS

Flammability:	1	Reactivity:	0	Health:	1

NFPA

Flammability:	1	Reactivity:	0	Health:	1

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
WARNING! May be harmful if swallowed, inhaled or absorbed through skin. Irritating to eyes, respiratory system and skin. May cause central nervous system depression.
Form: solid Color: white Odor: Acetic acid.

POTENTIAL HEALTH EFFECTS

INGESTION
May be harmful if swallowed. May cause central nervous system effects. May cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

SKIN
Uncured product contact will irritate lips, gums and tongue. Skin irritation is possible after contact with the uncured product. May be absorbed through skin and produce effects as listed under "Ingestion".

INHALATION
Causes mild respiratory tract irritation. Applies in uncured state. May be harmful if inhaled.

EYES
Eye irritation on contact with the uncured product.

MEDICAL CONDITIONS AGGRAVATED
Pre-existing skin or respiratory diseases.

SUBCHRONIC (TARGET ORGAN)
Skin; Central nervous system

CHRONIC EFFECTS / CARCINOGENICITY

This product or one of its ingredients present at 0.1% or more is NOT listed as a carcinogen or suspected carcinogen by NTP, IARC, or OSHA.

ROUTES OF EXPOSURE

Dermal; Eyes; Inhalation

3. COMPOSITION/INFORMATION ON INGREDIENTS

PRODUCT COMPOSITION	CAS REG NO.	WGT. %
A. HAZARDOUS		
DISTILLATES, PETROLEUM,HYDROTREATED	64742-47-8	5 - 10 %
METHYLTRIACETOXYSILANE	4253-34-3	1 - 5 %
B. NON-HAZARDOUS		
dimethylpolysiloxane	70131-67-8	60 - 100 %
Treated Filler	68611-44-9	5 - 10 %
Titanium Dioxide	13463-67-7	1 - 5 %

4. FIRST AID MEASURES

INGESTION

Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

SKIN

To clean from skin, remove completely with a dry cloth or paper towel, before washing with detergent and water. If skin irritation persists, call a physician.

INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration using a barrier device. If breathing is difficult give oxygen. Get medical attention.

EYES

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

NOTE TO PHYSICIAN

None known.

5. FIRE-FIGHTING MEASURES

FLASH POINT:	> 93.3 °C; 200 °F
METHOD:	estimated
IGNITION TEMPERATURE:	Unknown
FLAMMABLE LIMITS IN AIR - LOWER (%):	Unknown
FLAMMABLE LIMITS IN AIR - UPPER (%):	Unknown
SENSITIVITY TO MECHANICAL IMPACT:	No

SENSITIVITY TO STATIC DISCHARGE

Sensitivity to static discharge is not expected.

EXTINGUISHING MEDIA

All standard extinguishing agents are suitable.

SPECIAL FIRE FIGHTING PROCEDURES

Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Wipe, scrape or soak up in an inert material and put in a container for disposal. Wash walking surfaces with detergent and water to reduce slipping hazard. Wear proper protective equipment as specified in the protective equipment section. Increase area ventilation.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Use only in well-ventilated areas. Avoid contact with skin and eyes. Eye irritation on contact with the uncured product. Skin irritation is possible after contact with the uncured product. CAUTION! Remove contact lenses before using sealant. Do not handle lenses until all sealant has been cleaned from the fingertips, nails and cuticles. Residual sealant may remain on fingers for several days and transfer to lenses and cause severe eye irritation. Product releases acetic acid during application and curing. Use mechanical ventilation to stay below TLV of 10 ppm acetic acid.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS
Eyewash stations

RESPIRATORY PROTECTION
If exposure limits are exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Supplied air respirators may be required for non-routine or emergency situations. Respiratory protection must be provided in accordance with OSHA regulations (see 29CFR 1910.134).

PROTECTIVE GLOVES
Cloth gloves.

EYE AND FACE PROTECTION
Safety glasses

OTHER PROTECTIVE EQUIPMENT
Wear suitable protective clothing and eye/face protection.

Exposure Guidelines

Component	CAS RN	Source	Value

Absence of values indicates none found

PEL - OSHA Permissible Exposure Limit; TLV - ACGIH Threshold Limit Value; TWA - Time Weighted Average; INTL REL - Internal Recommended Exposure Limit

OSHA revoked the Final Rule Limits of January 19, 1989 in response to the 11th Circuit Court of Appeals decision (AFL-CIO v. OSHA) effective June 30, 1993. See 29 CFR 1910.1000 (58 FR 35338).

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT - C & F:	not applicable
VAPOR PRESSURE (20 C) (MM HG):	not applicable
FREEZING POINT:	not applicable
PHYSICAL STATE:	solid
ODOR:	Acetic acid.
COLOR:	white
EVAPORATION RATE (BUTYL ACETATE=1):	< 1
SPECIFIC GRAVITY (WATER=1):	ca. 1.04
DENSITY:	ca. 1.04 g/cm3
ACID / ALKALINITY (MEQ/G):	not applicable
pH:	not applicable
VOLATILE ORGANIC CONTENT (VOL):	2.8 %(m)
SOLUBILITY IN WATER (20 C):	insoluble
SOLUBILITY IN ORGANIC SOLVENT (STATE SOLVENT):	Toluene

VOC EXCL. H2O & EXEMPTS (G/L): 36

10. STABILITY AND REACTIVITY

STABILITY
Stable

HAZARDOUS POLYMERIZATION
Will not occur.

HAZARDOUS THERMAL DECOMPOSITION / COMBUSTION PRODUCTS
Carbon dioxide (CO2); Carbon monoxide; Silicon dioxide.; formaldehyde; Acetic acid.; This product contains methylpolysiloxanes which can generate formaldehyde at approximately 300 degrees Fahrenheit (150'C) and above, in atmospheres which contain oxygen. Formaldehyde is a skin and respiratory sensitizer, eye and throat irritant, acute toxicant, and potential cancer hazard. A MSDS for formaldehyde is available from Momentive.

INCOMPATIBILITY (MATERIALS TO AVOID)
None known.

CONDITIONS TO AVOID
None known.

11. TOXICOLOGICAL INFORMATION

ACUTE ORAL
Remarks: Not applicable.

ACUTE DERMAL
Remarks: Not applicable.

ACUTE INHALATION
Remarks: Not applicable.

OTHER
None.

SENSITIZATION
No data available

SKIN IRRITATION
No data available

EYE IRRITATION
No data available

MUTAGENICITY
Unknown

OTHER EFFECTS OF OVEREXPOSURE
Acetic acid released during curing.

12. ECOLOGICAL INFORMATION

ECOTOXICITY

No data available

DISTRIBUTION
No data available
CHEMICAL FATE
No data available

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD
Disposal should be made in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

Further Information: This product is not regarded as dangerous goods according to the national and international regulations on the transport of dangerous goods.

15. REGULATORY INFORMATION

Inventories

Japan Inventory of Existing & New Chemical Substances (ENCS)	y (positive listing)
Korea Existing Chemicals Inventory (KECI)	y (positive listing)
China Inventory of Existing Chemical Substances	y (positive listing)
Australia Inventory of Chemical	y (positive listing)

Substances (AICS)		
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	y (positive listing)	
EU list of existing chemical substances	y (positive listing)	
Canada DSL Inventory	y (positive listing)	
Canada NDSL Inventory	n (Negative listing)	
TSCA list	y (positive listing)	On TSCA Inventory

For inventories that are marked as quantity restricted or special cases, please contact Momentive.

US Regulatory Information

SARA (311,312) HAZARD CLASS

Acute Health Hazard; Chronic Health Hazard

SARA (313) CHEMICALS

CALIFORNIA PROPOSITION 65

This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

Canadian Regulatory Information

WHMIS HAZARD CLASS

D2B - Toxic Material Causing Other Toxic Effects
D2A - Very Toxic Material Causing Other Toxic Effects

Other

SCHDLE B/HTSUS: 3214.10.00.10 Mastic based on rubber

ECCN: EAR99

16. OTHER INFORMATION

OTHER

C = ceiling limit NEGL = negligible EST = estimated NF = none found NA = not applicable UNKN = unknown NE = none established REC = recommended ND = none determined V = recommended by vendor SKN = skin TS = trade secret R = recommended MST = mist NT = not tested STEL = short term exposure limit ppm = parts per million ppb = parts per billion By-product= reaction by-product, TSCA inventory status not required under 40 CFR part 720.30(h-2)., These data are offered in good faith as typical values

and not as product specifications. No warranty, either expressed or implied, is made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

Common Name: GE5000 12G-CRTRG (0.730 LBS-0.331 KG) SILICONE RUBBER SEALANT
Manufacturer: GENERAL ELECTRIC
MSDS Revision Date: 12/14/2006

Grainger Item Number(s): 4UH03
Manufacturer Model Number(s):

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MATERIAL SAFETY DATA SHEET

GE

ADVANCED MATERIALS - SILICONES

VERSION: 1.4

12/14/2006

GE5000 12G-CRTRG (0.730 LBS-0.331 KG) SILICONE RUBBER SEALANT

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURED BY:
GES WATERFORD PLANT
260 HUDSON RIVER RD
WATERFORD, NY 12188

REVISED: 12/14/2006

PREPARER: PRODUCT STEWARDSHIP COMPLIANCE AND STANDARDS

CHEMTREC: 1-800-424-9300

CHEMICAL FAMILY/USE: SILICONE RUBBER

FORMULA: MIXTURE

HMIS:
HEALTH 1
FLAMMABILITY 0
REACTIVITY 0
PROT. EQUIPM.

NFPA:
HEALTH 1
FLAMMABILITY 1
REACTIVITY 0
SPECIAL HAZ.

2. COMPOSITION/INFORMATION ON INGREDIENTS

PRODUCT COMPOSITION	CAS REG NO.	WGT. %
A. HAZARDOUS:		
DISTILLATES, PETROLEUM, HYDROTREATED LIGHT	64742-47-8	5 - 10%
HEXAMETHYLDISILAZANE	999-97-3	1 - 5%
METHYLTRIMETHOXYSILANE	1185-55-3	1 - 5%
B. NON-HAZARDOUS:		
TREATED FUMED SILICA	68583-49-3	10 - 30%
POLYDIMETHYLSILOXANE	63148-62-9	10 - 30%

METHOXYPOLYDIMETHYLSILOXANE	68037-58-1	30 - 60%

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

WARNING!

MAY BE HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. IRRITATING TO EYES, RESPIRATORY SYSTEM AND SKIN. MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION. MAY CAUSE ADVERSE REPRODUCTIVE EFFECTS. ADVERSE REPRODUCTIVE EFFECTS REPORTED IN ANIMALS.

FORM: SOLID

COLOR: TRANSLUCENT

ODOR: AMMONIA

POTENTIAL HEALTH EFFECTS:

INGESTION:
MAY BE HARMFUL IF SWALLOWED. MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS. MAY CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, AND DIARRHEA.

SKIN:
UNCURED PRODUCT CONTACT WILL IRRITATE LIPS, GUMS AND TONGUE. MAY CAUSE SKIN IRRITATION. MAY BE ABSORBED THROUGH SKIN AND PRODUCE EFFECTS AS LISTED UNDER "INGESTION".

INHALATION:
APPLIES IN UNCURED STATE. MAY CAUSE RESPIRATORY TRACT IRRITATION. MAY ALSO CAUSE OTHER EFFECTS AS LISTED UNDER "INGESTION".

EYES: EYE IRRITATION ON CONTACT WITH THE UNCURED PRODUCT.

MEDICAL CONDITIONS AGGRAVATED:
RESPIRATORY DISORDER. CENTRAL NERVOUS SYSTEM DISORDERS. SKIN DISORDERS.

SUBCHRONIC (TARGET ORGAN): LIVER; CENTRAL NERVOUS SYSTEM

CHRONIC EFFECTS / CARCINOGENICITY:
THIS PRODUCT OR ONE OF ITS INGREDIENTS PRESENT AT 0.1% OR MORE IS NOT LISTED AS A CARCINOGEN OR SUSPECTED CARCINOGEN BY NTP, IARC, OR OSHA.

ROUTES OF EXPOSURE: DERMAL; EYES

4. FIRST AID MEASURES

INGESTION:
DO NOT INDUCE VOMITING. SLOWLY DILUTE WITH 1-2 GLASSES OF WATER OR MILK AND SEEK MEDICAL ATTENTION. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

SKIN:
TO CLEAN FROM SKIN, REMOVE COMPLETELY WITH A DRY CLOTH OR PAPER TOWEL, BEFORE WASHING WITH DETERGENT AND WATER.

INHALATION:
IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION USING A BARRIER DEVICE. IF BREATHING IS DIFFICULT GIVE OXYGEN. GET MEDICAL ATTENTION.

EYES:
IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND GET MEDICAL ATTENTION IF IRRITATION PERSISTS.

NOTE TO PHYSICIAN: TREATMENT IS SYMPTOMATIC AND SUPPORTIVE.

5. FIRE-FIGHTING MEASURES

FLASH POINT:
METHOD: NOT APPLICABLE

IGNITION TEMPERATURE:: UNKNOWN

FLAMMABLE LIMITS IN AIR - LOWER (%): NOT APPLICABLE
FLAMMABLE LIMITS IN AIR - UPPER (%): NOT APPLICABLE

SENSITIVITY TO MECHANICAL IMPACT: NO

SENSITIVITY TO STATIC DISCHARGE:
SENSITIVITY TO STATIC DISCHARGE IS NOT EXPECTED.

EXTINGUISHING MEDIA:
ALL STANDARD EXTINGUISHING AGENTS ARE SUITABLE. NONE

SPECIAL FIRE FIGHTING PROCEDURES:
FIREFIGHTERS MUST WEAR NIOSH/MSHA APPROVED POSITIVE PRESSURE SELF-CONTAINED

BREATHING APPARATUS WITH FULL FACE MASK AND FULL PROTECTIVE CLOTHING.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
WIPE, SCRAPE OR SOAK UP IN AN INERT MATERIAL AND PUT IN A CONTAINER FOR DISPOSAL. WASH WALKING SURFACES WITH DETERGENT AND WATER TO REDUCE SLIPPING HAZARD. WEAR PROPER PROTECTIVE EQUIPMENT AS SPECIFIED IN THE PROTECTIVE EQUIPMENT SECTION. INCREASE AREA VENTILATION.

7. HANDLING AND STORAGE

STORAGE:
STORE AWAY FROM HEAT, SOURCES OF IGNITION, AND INCOMPATIBLES. KEEP OUT OF THE REACH OF CHILDREN.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
AVOID CONTACT WITH SKIN AND EYES. REMOVE CONTACT LENSES BEFORE USING SEALANT. DO NOT HANDLE LENSES UNTIL ALL SEALANT HAS BEEN CLEANED FROM THE FINGERTIPS, NAILS AND CUTICLES. RESIDUAL SEALANT MAY REMAIN ON FINGERS FOR SEVERAL DAYS AND TRANSFER TO LENSES AND CAUSE SEVERE EYE IRRITATION. USE ONLY IN WELL-VENTILATED AREAS. KEEP CONTAINER CLOSED WHEN NOT IN USE. PRODUCT RELEASES METHANOL DURING APPLICATION AND CURING. PRODUCT RELEASES AMMONIA DURING APPLICATION AND CURING.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:
EYEWASH STATIONS; SHOWERS; VENTILATION AND OTHER FORMS OF ENGINEERING CONTROLS ARE PREFERRED FOR CONTROLLING EXPOSURES. RESPIRATORY PROTECTION MAY BE NEEDED FOR NON-ROUTINE OR EMERGENCY SITUATIONS.

RESPIRATORY PROTECTION:
IF EXPOSURE LIMITS ARE EXCEEDED OR RESPIRATORY IRRITATION IS EXPERIENCED, NIOSH/MSHA APPROVED RESPIRATORY PROTECTION SHOULD BE WORN. SUPPLIED AIR RESPIRATORS MAY BE REQUIRED FOR NON-ROUTINE OR EMERGENCY SITUATIONS. RESPIRATORY PROTECTION MUST BE PROVIDED IN ACCORDANCE WITH OSHA REGULATIONS (SEE 29 CFR 1910.134),

PROTECTIVE GLOVES: CLOTH GLOVES.

EYE AND FACE PROTECTION: SAFETY GLASSES

OTHER PROTECTIVE EQUIPMENT:
WEAR SUITABLE PROTECTIVE CLOTHING AND EYE/FACE PROTECTION.

EXPOSURE GUIDELINES:

COMPONENT	CAS RN	SOURCE	VALUE
TREATED FUMED SILICA	68583-49-3	ACGIH, TWA	RESPIRABLE DUST. 3 MG/M3
TREATED FUMED SILICA	68583-49-3	ACGIH, TWA	INHALABLE DUST. 10 MG/M3
TREATED FUMED SILICA	68583-49-3	OSHA Z1, TWA PEL	RESPIRABLE DUST. 5 MG/M3
TREATED FUMED SILICA	68583-49-3	OSHA Z1, TWA PEL	TOTAL DUST. 15 MG/M3

ABSENCE OF VALUES INDICATES NONE FOUND

PEL - OSHA PERMISSIBLE EXPOSURE LIMIT
TLV - ACGIH THRESHOLD LIMIT VALUE
TWA - TIME WEIGHTED AVERAGE

OSHA REVOKED THE FINAL RULE LIMITS OF JANUARY 19, 1989 IN RESPONSE TO THE 11TH CIRCUIT COURT OF APPEALS DECISION (AFL-CIO V. OSHA) EFFECTIVE JUNE 30, 1993. SEE 29 CFR 1910.1000 (58 FR 35338).

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT - C & F: NOT APPLICABLE

VAPOR PRESSURE (20 C) (MMHG): NOT APPLICABLE

VAPOR DENSITY (AIR=1):

FREEZING POINT: NOT APPLICABLE

MELTING POINT: NOT APPLICABLE

PHYSICAL STATE: SOLID

ODOR: AMMONIA

COLOR: TRANSLUCENT

EVAPORATION RATE (BUTYL ACETATE=1): <1

SPECIFIC GRAVITY (WATER=1): CA. 1.05

DENSITY: NOT APPLICABLE

ACID / ALKALINITY (MEQ/G): UNKNOWN

pH: NOT APPLICABLE

VOLATILE ORGANIC CONTENT (VOL): NOT APPLICABLE

SOLUBILITY IN WATER (20 C): NEGLIGIBLE

SOLUBILITY IN ORGANIC SOLVENT (STATE SOLVENT): TOLUENE

VOC EXCL. H2O & EXEMPTS (G/L): CA. 27

10. STABILITY AND REACTIVITY

STABILITY: STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

HAZARDOUS THERMAL DECOMPOSITION / COMBUSTION PRODUCTS:
CARBON MONOXIDE; CARBON DIOXIDE (CO2); SILICON DIOXIDE.; METHANOL; FORMALDEHYDE; AMMONIA

INCOMPATIBILITY (MATERIALS TO AVOID): NONE KNOWN.

CONDITIONS TO AVOID:
VAPOR AND/OR LIQUID REACT WITH WATER TO FORM AMMONIA. APPLIES IN UNCURED STATE.

11. TOXICOLOGICAL INFORMATION

ACUTE ORAL:
REMARKS: UNKNOWN

ACUTE DERMAL:
REMARKS: UNKNOWN

ACUTE INHALATION:
REMARKS: UNKNOWN

OTHER:
NONE., CONTAINS DIBUTYLTIN COMPOUND(S) - MAY IMPAIR FERTILITY. MAY CAUSE HARM TO UNBORN CHILD.

SENSITIZATION: NO DATA AVAILABLE

SKIN IRRITATION: NO DATA AVAILABLE

EYE IRRITATION: NO DATA AVAILABLE

MUTAGENICITY: UNKNOWN

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGY: ECOTOXICOLOGICAL DATA FOR THIS PRODUCT IS NOT AVAILABLE.

CHEMICAL FATE: NO DATA AVAILABLE

DISTRIBUTION: NO DATA AVAILABLE

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD:
DISPOSAL SHOULD BE MADE IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

14. TRANSPORT INFORMATION

FURTHER INFORMATION:
THIS PRODUCT IS NOT REGARDED AS DANGEROUS GOODS ACCORDING TO THE NATIONAL AND INTERNATIONAL REGULATIONS ON THE TRANSPORT OF DANGEROUS GOODS.

15. REGULATORY INFORMATION

INVENTORIES:

CANADA DSL INVENTORY: Y (POSITIVE LISTING)

KOREA EXISTING CHEMICALS INVENTORY (KECI): Y (POSITIVE LISTING)

CHINA INVENTORY OF EXISTING CHEMICAL SUBSTANCES: Y (POSITIVE LISTING)

AUSTRALIA INVENTORY OF CHEMICAL SUBSTANCES (AICS): Y (POSITIVE LISTING)

PHILIPPINES INVENTORY OF CHEMICALS AND CHEMICAL SUBSTANCES (PICCS):
Y (POSITIVE LISTING)

TSCA LIST: Y (POSITIVE LISTING)

EU LIST OF EXISTING CHEMICAL SUBSTANCES: Y (POSITIVE LISTING)

CANADA NDSL INVENTORY: N (NEGATIVE LISTING)

JAPAN INVENTORY OF EXISTING & NEW CHEMICAL SUBSTANCES (ENCS):
N (NEGATIVE LISTING)

FOR INVENTORIES THAT ARE MARKED AS QUANTITY RESTRICTED OR SPECIAL CASES,
PLEASE CONTACT GE.

US REGULATORY INFORMATION:

CERCLA:

PRODUCT COMPOSITION	CHEMICAL	CERCLA REPORTABLE QUANTITY

CLEAN AIR ACT:

CLEAN WATER ACT:

SARA SECTION 302:

SARA (311, 312) HAZARD CLASS: ACUTE HEALTH HAZARD

SARA (313) CHEMICALS:

CANADIAN REGULATORY INFORMATION:

WHMIS HAZARD CLASS:
D2A: VERY TOXIC MATERIALS
D2B: TOXIC MATERIALS

OTHER:

SCHDLE B/HTSUS: 3214.10 MASTIC BASED ON RUBBER

ECCN: EAR99

CALIFORNIA PROPOSITION 65:
THIS PRODUCT DOES NOT CONTAIN ANY CHEMICALS KNOWN TO STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH, OR ANY OTHER REPRODUCTIVE DEFECTS.

16. OTHER INFORMATION

OTHER:
C = CEILING LIMIT
NEGL = NEGLIGIBLE
EST = ESTIMATED
NF = NONE FOUND
NA = NOT APPLICABLE
UNKN = UNKNOWN
NE = NONE ESTABLISHED
REC = RECOMMENDED
ND = NONE DETERMINED
V = RECOMMENDED BY VENDOR
SKN = SKIN
TS = TRADE SECRET
R = RECOMMENDED
MST = MIST
NT = NOT TESTED
STEL = SHORT TERM EXPOSURE LIMIT
PPM = PARTS PER MILLION
PPB = PARTS PER BILLION
BY-PRODUCT = REACTION BY-PRODUCT, TSCA INVENTORY STATUS NOT REQUIRED UNDER 40 CFR PART 720.30(H-2).

THESE DATA ARE OFFERED IN GOOD FAITH AS TYPICAL VALUES AND NOT AS PRODUCT SPECIFICATIONS. NO WARRANTY, EITHER EXPRESSED OR IMPLIED, IS MADE. THE RECOMMENDED INDUSTRIAL HYGIENE AND SAFE HANDLING PROCEDURES ARE BELIEVED TO BE GENERALLY APPLICABLE. HOWEVER, EACH USER SHOULD REVIEW THESE RECOMMENDATIONS IN THE SPECIFIC CONTEXT OF THE INTENDED USE AND DETERMINE WHETHER THEY ARE APPROPRIATE.

Downloaded 8/3/2007

MOMENTIVE
performance materials

Material Safety Data Sheet

Version: 1.2
07/13/2007

GE5010 12C-Crtrg (0.730 Lbs-0.331 Kg) Silicone Rubber Sealant

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufactured By:	**Waterford Plant** **260 Hudson River Rd** **Waterford NY 12188**
Revised:	07/13/2007
Preparer:	PRODUCT STEWARDSHIP COMPLIANCE AND STANDARDS
CHEMTREC	1-800-424-9300
Chemical Family/Use:	Sealant
Formula:	Mixture

HMIS

Flammability:	0	Reactivity:	0	Health:	1

NFPA

Flammability:	0	Reactivity:	0	Health:	1

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING! May be harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes, respiratory system and skin. May cause central nervous system depression. May cause adverse reproductive effects. Adverse reproductive effects reported in animals.

Form: solid Color: white Odor: Ammonia

POTENTIAL HEALTH EFFECTS

INGESTION

May be harmful if swallowed. May cause central nervous system effects. May cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

SKIN

Skin irritation is possible after contact with the uncured product. Uncured product contact will irritate lips, gums and tongue. May be absorbed through skin and produce effects as listed under "Ingestion".

INHALATION

Causes mild respiratory tract irritation. Applies in uncured state. May also cause other effects as listed under "Ingestion".

EYES

Eye irritation on contact with the uncured product.

MEDICAL CONDITIONS AGGRAVATED

Pre-existing skin or respiratory diseases.

SUBCHRONIC (TARGET ORGAN)
Skin; Central nervous system

CHRONIC EFFECTS / CARCINOGENICITY
This product or one of its ingredients present at 0.1% or more is NOT listed as a carcinogen or suspected carcinogen by NTP, IARC, or OSHA.

ROUTES OF EXPOSURE
Inhalation; Dermal; Eyes; Oral.; Absorption through skin.

3. COMPOSITION / INFORMATION ON INGREDIENTS

PRODUCT COMPOSITION	CAS REG NO.	WGT. %
A. HAZARDOUS		
DISTILLATES, PETROLEUM,HYDROTREATED	64742-47-8	5 - 10 %
hexamethyl disilazane	999-97-3	1 - 5 %
Methyl trimethoxysilane	1185-55-3	1 - 5 %
B. NON-HAZARDOUS		
Treated Filler	68611-44-9	10 - 30 %
Polydimethylsiloxane	63148-62-9	10 - 30 %
Methoxypolydimethylsiloxane	68037-58-1	30 - 60 %

4. FIRST AID MEASURES

INGESTION
Do not induce vomiting. If victim is conscious, give 1-3 glasses of water to drink. Never give anything by mouth to an unconscious person. Get medical attention if irritation persists.

SKIN
To clean from skin, remove completely with a dry cloth or paper towel, before washing with detergent and water. Get medical attention if irritation persists.

INHALATION
If inhaled, remove to fresh air. If not breathing give artificial respiration using a barrier device. If breathing is difficult give oxygen. Get medical attention.

EYES
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get

medical attention if irritation persists.

NOTE TO PHYSICIAN
None known.

5. FIRE-FIGHTING MEASURES

METHOD:	Not applicable Not applicable
IGNITION TEMPERATURE:	Unknown
FLAMMABLE LIMITS IN AIR - LOWER (%):	Not applicable
FLAMMABLE LIMITS IN AIR - UPPER (%):	Not applicable
SENSITIVITY TO MECHANICAL IMPACT:	No

EXTINGUISHING MEDIA
All standard extinguishing agents are suitable.

SPECIAL FIRE FIGHTING PROCEDURES
Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED
Wipe, scrape or soak up in an inert material and put in a container for disposal. Wash walking surfaces with detergent and water to reduce slipping hazard. Wear proper protective equipment as specified in the protective equipment section.

PERSONAL PRECAUTIONS
Avoid contact with skin and eyes. Keep container tightly closed. Remove contact lenses before using sealant. Do not handle lenses until all sealant has been cleaned from the fingertips, nails and cuticles. Residual sealant may remain on fingers for several days and transfer to lenses and cause severe eye irritation. Product releases methanol during application and curing. Product releases ammonia during application and curing.

7. HANDLING AND STORAGE

ADVICE ON SAFE HANDLING
Sensitivity to static discharge is not expected.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATORY PROTECTION

If exposure limits are exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Supplied air respirators may be required for non-routine or emergency situations. Respiratory protection must be provided in accordance with OSHA regulations (see 29 CFR 1910.134).

PROTECTIVE GLOVES

Cloth gloves.

EYE AND FACE PROTECTION

Safety glasses

OTHER PROTECTIVE EQUIPMENT

Wear suitable protective clothing and eye/face protection.

Exposure Guidelines

Component	CAS RN	Source	Value

Absence of values indicates none found

PEL - OSHA Permissible Exposure Limit; TLV - ACGIH Threshold Limit Value; TWA - Time Weighted Average

OSHA revoked the Final Rule Limits of January 19, 1989 in response to the 11th Circuit Court of Appeals decision (AFL-CIO v. OSHA) effective June 30, 1993. See 29 CFR 1910.1000 (58 FR 35338).

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT - C & F:	Not applicable
VAPOR PRESSURE (20 C) (MM HG):	Not applicable
FREEZING POINT:	Not applicable
MELTING POINT:	Not applicable
PHYSICAL STATE:	solid
ODOR:	Ammonia
COLOR:	white
SPECIFIC GRAVITY (WATER=1):	1.05
DENSITY:	1,048.00 g/cm3
ACID / ALKALINITY (MEQ/G):	Unknown
pH:	Not applicable
VOLATILE ORGANIC CONTENT (VOL):	Not applicable
SOLUBILITY IN WATER (20 C):	Insoluble
SOLUBILITY IN ORGANIC SOLVENT (STATE SOLVENT):	PARTIAL IN TOLUENE
VOC EXCL. H2O & EXEMPTS (G/L):	27

10. STABILITY AND REACTIVITY

STABILITY
Stable

HAZARDOUS POLYMERIZATION
Will not occur

HAZARDOUS THERMAL DECOMPOSITION / COMBUSTION PRODUCTS
Methanol; Carbon dioxide (CO_2); formaldehyde; Carbon monoxide; Ammonia; Silicon dioxide.

INCOMPATIBILITY (MATERIALS TO AVOID)
None known.

CONDITIONS TO AVOID
Vapor and/or liquid react with water to form ammonia.

11. TOXICOLOGICAL INFORMATION

ACUTE ORAL
Remarks: Unknown

ACUTE DERMAL
Remarks: Unknown

ACUTE INHALATION
Remarks: Unknown

OTHER
Contains dibutyltin compound(s) - May impair fertility. May cause harm to unborn child.

MUTAGENICITY
Unknown

Other effects of overexposure
This product contains methylpolysiloxanes which can generate formaldehyde at approximately 300 degrees Fahrenheit (150'C) and above, in atmospheres which contain oxygen. Formaldehyde is a skin and respiratory sensitizer, eye and throat irritant, acute toxicant, and potential cancer hazard. A MSDS for formaldehyde is available from Momentive.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGY

CHEMICAL FATE
No data available

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD
Disposal should be made in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

Further Information: This product is not regarded as dangerous goods according to the national and international regulations on the transport of dangerous goods.

15. REGULATORY INFORMATION

Inventories

Canada DSL Inventory	y (Positive listing)
Korea Existing Chemicals Inventory (KECI)	y (Positive listing)
China Inventory of Existing Chemical Substances	y (Positive listing)
Australia Inventory of Chemical Substances (AICS)	y (Positive listing)
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	y (Positive listing)
EU list of existing chemical substances	y (Positive listing)
Canada NDSL Inventory	n (Negative listing)
Japan Inventory of Existing & New Chemical Substances (ENCS)	n (Negative listing)
TSCA list	y (Positive listing)

For inventories that are marked as quantity restricted or special cases, please contact Momentive.

US Regulatory Information

CERCLA
Reportable quantity: 40,983,606.557377 lbs
Reportable quantity: 6,666,666.666667 lbs

PRODUCT COMPOSITION	Chemical	CERCLA Reportable Quantity

SARA (311,312) HAZARD CLASS
Acute Health Hazard; Chronic Health Hazard

SARA (313) CHEMICALS

Canadian Regulatory Information

WHMIS HAZARD CLASS
D2A VERY TOXIC MATERIALS, D2B TOXIC MATERIALS

Other

SCHDLE B/HTSUS: 3214.10 Mastic Based on Rubber

ECCN: EAR99

CALIFORNIA PROPOSITION 65
This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

16. OTHER INFORMATION

OTHER
C = ceiling limit NEGL = negligible EST = estimated NF = none found NA = not applicable UNKN = unknown NE = none established REC = recommended ND = none determined V = recommended by vendor SKN = skin TS = trade secret R = recommended MST = mist NT = not tested STEL = short term exposure limit ppm = parts per million ppb = parts per billion By-product= reaction by-product, TSCA inventory status not required under 40 CFR part 720.30(h-2)., These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

MOMENTIVE
performance materials

Material Safety Data Sheet

Version: 1.5
11/26/2008

SILICONE II K&B ALMOND GE5060/12C/0.730 Lbs-0.331 Kg
Silicone Rubber Sealant

219345 Part# GE5060
SILICONE,GE,ALMOND,10-OZ #5060
2304000 MOMENTIVE PERF. MATERIALS
Buyer: Bernard W. Aubuchon Jr.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufactured By: **Waterford Plant**
260 Hudson River Rd
Waterford NY 12188

Revised: 11/26/2008
Preparer: PRODUCT STEWARDSHIP COMPLIANCE AND STANDARDS
CHEMTREC 1-800-424-9300

Chemical Family/Use: Silicone Rubber
Formula: Silicone sealant

HMIS

Flammability:	0	Reactivity:	0	Health:	1

NFPA

Flammability:	0	Reactivity:	0	Health:	1

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
WARNING! Harmful by inhalation, in contact with skin and if swallowed. May cause skin, eye, and stomach irritation. May cause central nervous system depression. May cause adverse reproductive effects. Adverse reproductive effects reported in animals.

Form: solid Color: ALMOND Odor: Ammonia

POTENTIAL HEALTH EFFECTS

INGESTION
May be harmful if swallowed. May cause stomach discomfort. May cause central nervous system effects. May cause gastrointestinal irritation, nausea, vomiting, and diarrhea. Not an anticipated route of exposure.

SKIN
Skin irritation is possible after contact with the uncured product. Uncured product contact will irritate lips, gums and tongue. May cause mild skin irritation. May be absorbed through skin and produce effects as listed under "Ingestion".

INHALATION
Causes mild respiratory tract irritation. Applies in uncured state. May also cause other effects as listed under "Ingestion".

EYES
Eye irritation on contact with the uncured product. May cause mild eye irritation.

MEDICAL CONDITIONS AGGRAVATED
Pre-existing skin or respiratory diseases.

not required under 40 CFR part 720.30(h-2)., These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

EYES

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

NOTE TO PHYSICIAN

None known.

5. FIRE-FIGHTING MEASURES

FLASH POINT:	> 93.3 °C; 200 °F
METHOD:	estimated
IGNITION TEMPERATURE:	Unknown
FLAMMABLE LIMITS IN AIR - LOWER (%):	not applicable
FLAMMABLE LIMITS IN AIR - UPPER (%):	not applicable
SENSITIVITY TO MECHANICAL IMPACT:	No

SENSITIVITY TO STATIC DISCHARGE

Sensitivity to static discharge is not expected.

EXTINGUISHING MEDIA

All standard extinguishing agents are suitable.

SPECIAL FIRE FIGHTING PROCEDURES

Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Wipe, scrape or soak up in an inert material and put in a container for disposal. Wash walking surfaces with detergent and water to reduce slipping hazard. Wear proper protective equipment as specified in the protective equipment section.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container closed when not in use. Avoid contact with skin and eyes. Use mechanical ventilation to stay below TLV of 25 ppm ammonia. Keep away from children. Store away from heat, sources of ignition, and incompatibles.

SENSITIZATION
No data available

SKIN IRRITATION
No data available

EYE IRRITATION
No data available

MUTAGENICITY
Unknown

OTHER EFFECTS OF OVEREXPOSURE
Methanol released during curing.

12. ECOLOGICAL INFORMATION

ECOTOXICITY

No data available

DISTRIBUTION
No data available
CHEMICAL FATE
No data available

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD
Disposal should be made in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

Further Information: This product is not regarded as dangerous goods according to the national and international regulations on the transport of dangerous goods.

15. REGULATORY INFORMATION

Inventories

DENSITY:	ca. 1.05 g/cm3
ACID / ALKALINITY (MEQ/G):	not applicable
pH:	not applicable
VOLATILE ORGANIC CONTENT (VOL):	2.2 %(m)
SOLUBILITY IN WATER (20 C):	insoluble
SOLUBILITY IN ORGANIC SOLVENT (STATE SOLVENT):	PARTIAL IN TOLUENE
VOC EXCL. H2O & EXEMPTS (G/L):	27

10. STABILITY AND REACTIVITY

STABILITY
Stable

HAZARDOUS POLYMERIZATION
Will not occur.

HAZARDOUS THERMAL DECOMPOSITION / COMBUSTION PRODUCTS
Carbon monoxide; Carbon dioxide (CO2); Silicon dioxide.; Methanol; formaldehyde; Ammonia; This product contains methylpolysiloxanes which can generate formaldehyde at approximately 300 degrees Fahrenheit (150'C) and above, in atmospheres which contain oxygen. Formaldehyde is a skin and respiratory sensitizer, eye and throat irritant, acute toxicant, and potential cancer hazard. A MSDS for formaldehyde is available from Momentive.

INCOMPATIBILITY (MATERIALS TO AVOID)
None known.

CONDITIONS TO AVOID
None known.

11. TOXICOLOGICAL INFORMATION

ACUTE ORAL
Remarks: Unknown

ACUTE DERMAL
Remarks: Unknown

ACUTE INHALATION
Remarks: Unknown

OTHER
Contains dibutyltin compound(s) - May impair fertility. May cause harm to unborn child.

STORAGE

Store away from heat, sources of ignition, and incompatibles. Keep out of the reach of children.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Eyewash stations; Showers

RESPIRATORY PROTECTION

If exposure limits are exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Supplied air respirators may be required for non-routine or emergency situations. Respiratory protection must be provided in accordance with OSHA regulations (see 29CFR 1910.134).

PROTECTIVE GLOVES

Cloth gloves.

EYE AND FACE PROTECTION

Safety glasses

OTHER PROTECTIVE EQUIPMENT

Wear suitable protective clothing and eye/face protection.

Exposure Guidelines

Component	CAS RN	Source	Value

Absence of values indicates none found

PEL - OSHA Permissible Exposure Limit; TLV - ACGIH Threshold Limit Value; TWA - Time Weighted Average; INTL REL - Internal Recommended Exposure Limit

OSHA revoked the Final Rule Limits of January 19, 1989 in response to the 11th Circuit Court of Appeals decision (AFL-CIO v. OSHA) effective June 30, 1993. See 29 CFR 1910.1000 (58 FR 35338).

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT - C & F:	not applicable
VAPOR PRESSURE (20 C) (MM HG):	not applicable
VAPOR DENSITY (AIR=1):	No data available
FREEZING POINT:	Unknown
PHYSICAL STATE:	solid
ODOR:	Ammonia
COLOR:	ALMOND
EVAPORATION RATE (BUTYL ACETATE=1):	No data available
SPECIFIC GRAVITY (WATER=1):	1.03

Canada DSL Inventory	y (positive listing)
Korea Existing Chemicals Inventory (KECI)	y (positive listing)
China Inventory of Existing Chemical Substances	y (positive listing)
Australia Inventory of Chemical Substances (AICS)	y (positive listing)
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	y (positive listing)
EU list of existing chemical substances	y (positive listing)
Canada NDSL Inventory	n (Negative listing)
Japan Inventory of Existing & New Chemical Substances (ENCS)	n (Negative listing)
TSCA list	y (positive listing)

For inventories that are marked as quantity restricted or special cases, please contact Momentive.

US Regulatory Information

SARA (311,312) HAZARD CLASS

Acute Health Hazard; Chronic Health Hazard

SARA (313) CHEMICALS

58-36-6, 10, 10'-oxybisphenoxarsine.

CALIFORNIA PROPOSITION 65

WARNING! This product contains a chemical known in the State of California to cause cancer.
108-88-3, Toluene.

Canadian Regulatory Information

WHMIS HAZARD CLASS

D2A - Very Toxic Material Causing Other Toxic Effects
D2B - Toxic Material Causing Other Toxic Effects

16. OTHER INFORMATION

OTHER

C = ceiling limit NEGL = negligible EST = estimated NF = none found NA = not applicable UNKN = unknown NE = none established REC = recommended ND = none determined V = recommended by vendor SKN = skin TS = trade secret R = recommended MST = mist NT = not tested STEL = short term exposure limit ppm = parts per million ppb = parts per billion By-product= reaction by-product, TSCA inventory status

SUBCHRONIC (TARGET ORGAN)
Skin; Central nervous system

CHRONIC EFFECTS / CARCINOGENICITY
This product or one of its ingredients present at 0.1% or more is NOT listed as a carcinogen or suspected carcinogen by NTP, IARC, or OSHA.

ROUTES OF EXPOSURE
Inhalation; Dermal; Eyes; Oral.

3. COMPOSITION/INFORMATION ON INGREDIENTS

PRODUCT COMPOSITION	CAS REG NO.	WGT. %
A. HAZARDOUS		
DISTILLATES (PETROLEUM), HYDROTREATED MIDDLE	64742-46-7	1 - 5 %
Hexamethyldisilazane	999-97-3	1 - 5 %
Methyltrimethoxysilane	1185-55-3	1 - 5 %
B. NON-HAZARDOUS		
Methoxypolydimethylsiloxane	68037-58-1	60 - 100 %
Polydimethylsiloxane	63148-62-9	10 - 30 %
Treated Filler	68611-44-9	10 - 30 %
DISTILLATES, PETROLEUM,HYDROTREATED	64742-47-8	000000003682

4. FIRST AID MEASURES

INGESTION
Do not induce vomiting. If victim is conscious, give 1-3 glasses of water to drink. Never give anything by mouth to an unconscious person. Get medical attention if irritation persists.

SKIN
To clean from skin, remove completely with a dry cloth or paper towel, before washing with detergent and water. If skin irritation persists, call a physician.

INHALATION
If inhaled, remove to fresh air. If not breathing give artificial respiration using a barrier device. If breathing is difficult give oxygen. Get medical attention.

Advanced Materials - Silicones

Material Safety Data Sheet

Version: 1.1
01/09/2006

GE5070 12C-Crtrg (0.730 Lbs-0.331 Kg) Silicone Rubber Sealant

213504 Part# GE5070
SILICONE, BATH,GE, 10-OZ #5070
2304000 MOMENTIVE PERF. MATERIALS
Buyer: Bernard W. Aubuchon Jr.

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufactured By: GES Waterford Plant
260 Hudson River Rd
Waterford NY 12188

Revised: 01/09/2006
Preparer: PRODUCT STEWARDSHIP COMPLIANCE AND STANDARDS
CHEMTREC 1-800-424-9300

Chemical Family/Use: Silicone Rubber
Formula: Mixture

HMIS

Flammability:	0	Reactivity:	0	Health:	1	Prot. Equipm.:

NFPA

Flammability:	1	Reactivity:	0	Health:	1	Special Haz.:

2. COMPOSITION/INFORMATION ON INGREDIENTS

PRODUCT COMPOSITION	CAS REG NO.	WGT. %
A. HAZARDOUS		
Hexamethyldisilazane	999-97-3	1 - 5 %
Methyltrimethoxysilane	1185-55-3	1 - 5 %
Distillates, petroleum, hydrotreated light	64742-47-8	5 - 10 %
B. NON-HAZARDOUS		
Treated fumed silica	68583-49-3	10 - 30 %
Polydimethylsiloxane	63148-62-9	10 - 30 %
Methoxypolydimethylsiloxane	68037-58-1	30 - 60 %

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
WARNING! May be harmful if swallowed, inhaled or absorbed through skin. Irritating to eyes, respiratory system and skin. May cause central nervous system depression.

Form: solid Color: white Odor: ammonia

POTENTIAL HEALTH EFFECTS

INGESTION

May be harmful if swallowed. May cause central nervous system effects. May cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

SKIN

Uncured product contact will irritate lips, gums and tongue. May cause skin irritation. May be absorbed through skin and produce effects as listed under "Ingestion".

INHALATION

Applies in uncured state. May cause respiratory tract irritation. May also cause other effects as listed under "Ingestion".

EYES

Eye irritation on contact with the uncured product.

MEDICAL CONDITIONS AGGRAVATED

respiratory disorder Central nervous system disorders. Skin disorders.

SUBCHRONIC (TARGET ORGAN)

Liver; Central nervous system

CHRONIC EFFECTS / CARCINOGENICITY

This product or one of its ingredients present at 0.1% or more is NOT listed as a carcinogen or suspected carcinogen by NTP, IARC, or OSHA.

ROUTES OF EXPOSURE

dermal; Eyes

OTHER

Methanol released during curing. This product contains methylpolysiloxanes which can generate formaldehyde at approximately 300 F (150 C) and above in atmospheres which contain oxygen. Formaldehyde is a skin and respiratory sensitizer, eye and throat irritant, acute toxicant, and potential cancer hazard. An MSDS for formaldehyde is available from GE Advanced Materials - Silicones.

4. FIRST AID MEASURES

INGESTION

Do not induce vomiting. If victim is conscious, give 1-3 glasses of water to drink. Never give anything by mouth to an unconscious person. Get medical attention if irritation persists.

SKIN

To clean from skin, remove completely with a dry cloth or paper towel, before washing with detergent and water. Get medical attention if irritation persists.

INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration using a barrier device. If

breathing is difficult give oxygen. Get medical attention.

EYES

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

NOTE TO PHYSICIAN

None known.

5. FIRE FIGHTING MEASURES

FLASH POINT:	
METHOD:	not applicable
IGNITION TEMPERATURE:	Unknown
FLAMMABLE LIMITS IN AIR - LOWER (%):	not applicable
FLAMMABLE LIMITS IN AIR - UPPER (%):	not applicable
SENSITIVITY TO MECHANICAL IMPACT:	No

SENSITIVITY TO STATIC DISCHARGE

Sensitivity to static discharge is not expected.

EXTINGUISHING MEDIA

All standard extinguishing agents are suitable.

SPECIAL FIRE FIGHTING PROCEDURES

Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Wipe, scrape or soak up in an inert material and put in a container for disposal. Wash walking surfaces with detergent and water to reduce slipping hazard. Wear proper protective equipment as specified in the protective equipment section.

7. HANDLING AND STORAGE

STORAGE

Store away from heat, sources of ignition, and incompatibles. Keep out of the reach of children.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Avoid contact with skin and eyes. Keep away from children. Keep container tightly closed. Remove contact lenses before using sealant. Do not handle lenses until all sealant has been cleaned from the fingertips, nails and cuticles. Residual sealant may remain on fingers for several days and transfer to

lenses and cause severe eye irritation. Use mechanical ventilation to stay below TLV of 25 ppm ammonia. Store away from heat, sources of ignition, and incompatibles. Product releases methanol during application and curing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS
Eyewash stations; Showers

RESPIRATORY PROTECTION
If exposure limits are exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Supplied air respirators may be required for non-routine or emergency situations. Respiratory protection must be provided in accordance with OSHA regulations (see 29 CFR 1910.134).

PROTECTIVE GLOVES
Cloth gloves.

EYE AND FACE PROTECTION
Safety glasses

OTHER PROTECTIVE EQUIPMENT
Wear suitable protective clothing and eye/face protection.

Exposure Guidelines

Component	CAS RN	Source	Value

Absence of values indicates none found

PEL - OSHA Permissible Exposure Limit; TLV - ACGIH Threshold Limit Value; TWA - Time Weighted Average

OSHA revoked the Final Rule Limits of January 19, 1989 in response to the 11th Circuit Court of Appeals decision (AFL-CIO v. OSHA) effective June 30, 1993. See 29 CFR 1910.1000 (58 FR 35338).

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT - C & F:	not applicable
VAPOR PRESSURE (20 C) (MM HG):	not applicable
VAPOR DENSITY (AIR=1):	
FREEZING POINT:	Unknown
MELTING POINT:	Unknown
PHYSICAL STATE:	solid
ODOR:	ammonia
COLOR:	white
EVAPORATION RATE (BUTYL ACETATE=1):	< 1
SPECIFIC GRAVITY (WATER=1):	1.03
DENSITY (KG/M3):	1,035.00 KG/M3

ACID / ALKALINITY (MEQ/G):	not applicable
pH:	not applicable
VOLATILE ORGANIC CONTENT (VOL):	not applicable
SOLUBILITY IN WATER (20 C):	insoluble
SOLUBILITY IN ORGANIC SOLVENT (STATE SOLVENT):	PARTIAL IN TOLUENE
VOC EXCL. H2O & EXEMPTS (G/L):	27.00

10. STABILITY AND REACTIVITY

STABILITY
Stable

HAZARDOUS POLYMERIZATION
Will not occur

HAZARDOUS THERMAL DECOMPOSITION / COMBUSTION PRODUCTS
Methanol; carbon dioxide (CO2); formaldehyde; amines; Carbon monoxide; Silicon dioxide; Oxides of nitrogen.

INCOMPATIBILITY (MATERIALS TO AVOID)
None known.

CONDITIONS TO AVOID
None known.

11. TOXICOLOGICAL INFORMATION

ACUTE ORAL
Unknown

ACUTE DERMAL
Unknown

ACUTE INHALATION
Unknown

OTHER
None.

SENSITIZATION
no data available

SKIN IRRITATION
no data available

EYE IRRITATION
no data available

MUTAGENICITY
Unknown

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGY
no data available

CHEMICAL FATE
no data available

DISTRIBUTION
no data available

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD
Disposal should be made in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

Not Regulated if Section is Blank

15. REGULATORY INFORMATION

Inventories

TSCA list	y (positive listing)
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	y (positive listing)
Canada NDSL Inventory	n (Negative listing)
EU list of existing chemical substances	y (positive listing)
Australia Inventory of Chemical Substances (AICS)	y (positive listing)
Canada DSL Inventory	y (positive listing)
Korea Existing Chemicals Inventory (KECI)	y (positive listing)
China Inventory of Existing	y (positive listing)

Chemical Substances
For inventories that are marked as quantity restricted or special cases, please contact GE.

US Regulatory Information

CERCLA

PRODUCT COMPOSITION	Chemical	CERCLA Reportable Quantity

CLEAN AIR ACT

CLEAN WATER ACT

SARA SECTION 302

SARA (311,312) HAZARD CLASS
Acute Health Hazard

SARA (313) CHEMICALS
58-36-6, 10, 10'-oxybisphenoxarsine

Canadian Regulatory Information

WHMIS HAZARD CLASS
D2A VERY TOXIC MATERIALS, D2B TOXIC MATERIALS

Other

SCHDLE B/HTSUS: 3214.10 Mastic Based on Rubber

ECCN: EAR99

CALIFORNIA PROPOSITION 65
This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other harm.

16. OTHER INFORMATION

OTHER
C = ceiling limit NEGL = negligible EST = estimated NF = none found NA = not applicable UNKN = unknown NE = none established REC = recommended ND = none determined V = recommended by vendor SKN = skin TS = trade secret R = recommended MST = mist NT = not tested STEL = short term exposure limit ppm = parts per million ppb = parts per billion By-product = reaction by-product, TSCA inventory status not required under 40 CFR part 720.30(h-2)., These data are offered in good faith as typical values

and not as product specifications. No warranty, either expressed or implied, is made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

Material Safety Data Sheet

MOMENTIVE performance materials

Version: 1.12
04/09/2008

GE7000 12C-CRTRG(1.0LBS-0.459KG) Paintable Sealant

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufactured By:	**Canada Plant** **1063 Copperstone Drive** **Pickering ON L1W 3V8**
Revised:	04/09/2008
Preparer:	PRODUCT STEWARDSHIP COMPLIANCE AND STANDARDS
CHEMTREC	1-800-424-9300
Chemical Family/Use:	Sealant
Formula:	Mixture

HMIS

Flammability:	1	Reactivity:	0	Health:	1

NFPA

Flammability:	1	Reactivity:	0	Health:	1

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING! May be harmful if swallowed. May cause adverse reproductive effects. Adverse reproductive effects reported in animals. May cause irritation of skin and eyes. May cause respiratory tract irritation.

Form: Solid Color: White Odor: Slight

POTENTIAL HEALTH EFFECTS

INGESTION

May be harmful if swallowed. Irritation of the mouth, throat, and stomach.

SKIN

Uncured product contact will irritate lips, gums and tongue. May cause skin irritation.

INHALATION

Applies in uncured state. Irritating to respiratory system. Causes irritation of the mouth, nose, and throat. Avoid inhalation of vapour or mist.

EYES

Eye irritation on contact with the uncured product. High vapor concentration will cause irritation.

MEDICAL CONDITIONS AGGRAVATED

Pre-existing skin or respiratory diseases.

SUBCHRONIC (TARGET ORGAN)

None known.

CHRONIC EFFECTS / CARCINOGENICITY

This product or one of its ingredients present at 0.1% or more is NOT listed as a carcinogen or

suspected carcinogen by NTP, IARC, or OSHA.

ROUTES OF EXPOSURE
Eyes; Inhalation; Dermal

3. COMPOSITION / INFORMATION ON INGREDIENTS

PRODUCT COMPOSITION	CAS REG NO.	WGT. %
A. HAZARDOUS		
Stearic Acid	57-11-4	1 - 5 %
DIBUTYL TINOXIDE	818-08-6	< 1 %
B. NON-HAZARDOUS		
CALCIUM CARBONATE	1317-65-3	30 - 60 %
Methoxysilyl capped polyether	75009-88-0	10 - 30 %
Limestone	471-34-1	10 - 30 %
SILYL TERMINATED POLYETHER	151865-59-7	5 - 10 %

4. FIRST AID MEASURES

INGESTION
Do not induce vomiting. If victim is conscious, give 1-3 glasses of water to drink. Never give anything by mouth to an unconscious person. Get medical attention if irritation persists.

SKIN
To clean from skin, remove completely with a dry cloth or paper towel, before washing with detergent and water. Get medical attention if irritation persists.

INHALATION
If inhaled, remove to fresh air. If not breathing give artificial respiration using a barrier device. If breathing is difficult give oxygen. Get medical attention.

EYES
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

NOTE TO PHYSICIAN
None known.

5. FIRE-FIGHTING MEASURES

FLASH POINT:	> 93.3 °C; 200 °F
METHOD:	estimated
IGNITION TEMPERATURE:	Unknown
FLAMMABLE LIMITS IN AIR - LOWER (%):	Not applicable
FLAMMABLE LIMITS IN AIR - UPPER (%):	Not applicable
SENSITIVITY TO MECHANICAL IMPACT:	No

SENSITIVITY TO STATIC DISCHARGE

Sensitivity to static discharge is not expected.

EXTINGUISHING MEDIA

All standard extinguishing agents are suitable.

SPECIAL FIRE FIGHTING PROCEDURES

Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Wipe, scrape or soak up in an inert material and put in a container for disposal. Wash walking surfaces with detergent and water to reduce slipping hazard. Wear proper protective equipment as specified in the protective equipment section. Increase area ventilation.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

CAUTION! Avoid contact with skin and eyes. Use only in well-ventilated areas. Eye irritation on contact with the uncured product. Remove contact lenses before using sealant. Do not handle lenses until all sealant has been cleaned from the fingertips, nails and cuticles. Residual sealant may remain on fingers for several days and transfer to lenses and cause severe eye irritation. Product releases methanol during application and curing.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS

Eyewash stations

RESPIRATORY PROTECTION

If exposure limits are exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Supplied air respirators may be required for non-routine or emergency situations. Respiratory protection must be provided in accordance with OSHA regulations (see 29CFR 1910.134).

PROTECTIVE GLOVES

Rubber or plastics gloves

EYE AND FACE PROTECTION

Safety glasses

OTHER PROTECTIVE EQUIPMENT

Wear suitable protective clothing and eye/face protection.

Exposure Guidelines

Component	CAS RN	Source	Value
Stearic Acid	57-11-4	ACGIH, TWA	10 mg/m3

Absence of values indicates none found

PEL - OSHA Permissible Exposure Limit; TLV - ACGIH Threshold Limit Value; TWA - Time Weighted Average

OSHA revoked the Final Rule Limits of January 19, 1989 in response to the 11th Circuit Court of Appeals decision (AFL-CIO v. OSHA) effective June 30, 1993. See 29 CFR 1910.1000 (58 FR 35338).

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT - C & F:	Not applicable
VAPOR PRESSURE (20 C) (MM HG):	Negligible
VAPOR DENSITY (AIR=1):	No data available
FREEZING POINT:	Not applicable
MELTING POINT:	Not applicable
PHYSICAL STATE:	Solid
ODOR:	Slight
COLOR:	White
EVAPORATION RATE (BUTYL ACETATE=1):	Not applicable
SPECIFIC GRAVITY (WATER=1):	1.40
DENSITY:	1.4 g/cm3
ACID / ALKALINITY (MEQ/G):	Unknown
pH:	Not applicable
VOLATILE ORGANIC CONTENT (VOL):	2.3 %(m)
SOLUBILITY IN WATER (20 C):	Insoluble
SOLUBILITY IN ORGANIC SOLVENT (STATE SOLVENT):	Toluene
VOC EXCL. H2O & EXEMPTS (G/L):	39

10. STABILITY AND REACTIVITY

STABILITY
Stable

HAZARDOUS POLYMERIZATION
Will not occur

HAZARDOUS THERMAL DECOMPOSITION / COMBUSTION PRODUCTS
Methanol; Carbon dioxide (CO_2); Formaldehyde; Carbon monoxide; Silicon dioxide.

INCOMPATIBILITY (MATERIALS TO AVOID)
None known.

CONDITIONS TO AVOID
None known.

11. TOXICOLOGICAL INFORMATION

ACUTE ORAL
Remarks: Not applicable.

ACUTE DERMAL
Remarks: Not applicable.

ACUTE INHALATION
Remarks: Not applicable.

OTHER
Contains dibutyltin compound(s) - May impair fertility. May cause harm to unborn child.

SENSITIZATION
No data available

SKIN IRRITATION
No data available

EYE IRRITATION
No data available

MUTAGENICITY
Unknown

OTHER EFFECTS OF OVEREXPOSURE
Methanol released during curing.

12. ECOLOGICAL INFORMATION

ECOTOXICITY

No data available

DISTRIBUTION
No data available
CHEMICAL FATE
No data available

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD
Disposal should be made in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

Further Information: This product is not regarded as dangerous goods according to the national and international regulations on the transport of dangerous goods.

15. REGULATORY INFORMATION

Inventories

China Inventory of Existing Chemical Substances	n (Negative listing)
EU list of existing chemical substances	y (Positive listing)
Canada DSL Inventory	y (Positive listing)
Canada NDSL Inventory	n (Negative listing)
Japan Inventory of Existing & New Chemical Substances (ENCS)	n (Negative listing)
Australia Inventory of Chemical Substances (AICS)	n (Negative listing)
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	n (Negative listing)
TSCA list	y (Positive listing)

Korea Existing Chemicals Inventory (KECI) y (Positive listing)
For inventories that are marked as quantity restricted or special cases, please contact Momentive.

US Regulatory Information

SARA (311,312) HAZARD CLASS
Acute Health Hazard; Chronic Health Hazard

SARA (313) CHEMICALS
107-15-3, Ethylenediamine

CALIFORNIA PROPOSITION 65

Canadian Regulatory Information

WHMIS HAZARD CLASS
D2B TOXIC MATERIALS

Other

SCHDLE B/HTSUS: 3214.10 Mastic Based on Rubber

ECCN: EAR99

16. OTHER INFORMATION

OTHER

C = ceiling limit NEGL = negligible EST = estimated NF = none found NA = not applicable UNKN = unknown NE = none established REC = recommended ND = none determined V = recommended by vendor SKN = skin TS = trade secret R = recommended MST = mist NT = not tested STEL = short term exposure limit ppm = parts per million ppb = parts per billion By-product= reaction by-product, TSCA inventory status not required under 40 CFR part 720.30(h-2)., These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND DISTRIBUTOR'S INFORMATION

NFPA Rating: Health-2; Flammability-3; Reactivity-0; Special--

HMIS Rating: Health-2; Flammability-3; Reactivity-0; Personal Protection-B

Manufactured For: **Triple S**
Address: 2 Executive Park Dr.
Address: Billerica, MA 01803
Phone: 978-667-7900

DOT Hazard Classification: ORM-D
Identity (trade name as used on label)**:**
SSS Silicone Lubricant II #05220

MSDS Number: A00325 Revision- 10

Emergency Response Number: 1-800-255-3924
NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA

Date Prepared: 11/12/04 Prepared By: RC/IB
Information Calls: (770)422-2071

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
HEPTANE	142-82-5	No	500	400	d
POLY-DIMETHYLSILOXANE	63148-62-9	No	N/E	N/E	d
CYCLOHEXANE	110-82-7	Yes	300	300	d
ISOBUTANE / PROPANE BLEND	75-28-5	No	800	800	d
	74-98-6	No	1000	1000	d

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/A

Specific Gravity (H2O=1): Concentrate Only = 0.71

Vapor Pressure: PSIG @ 70°F (Aerosols): Max.60

Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A

Vapor Density (Air = 1): N/E

Evaporation Rate (water = 1): greater than 1

Solubility in Water: Insoluble

Water Reactive: No

Appearance and Odor: Clear colorless spray with solvent odor.

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) **EXTREMELY FLAMMABLE**

Auto Ignition Temperature N/E

Flammability Limits in Air by % in Volume: % LEL: N/E % UEL: N/E

FLASH POINT AND METHOD USED (non-aerosols): N/A
EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide, water.

SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus. Use water fog to prevent rupturing & exploding containers. Provide shielding for personnel.

Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture.

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY [X] STABLE [ ] UNSTABLE

HAZARDOUS POLYMERIZATION [ ] WILL [X] WILL NOT OCCUR

Incompatibility (Mat. to avoid): Strong oxidizing agents.

Conditions to Avoid: Open flame, welding arcs, heat, sparks.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide.

SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: [X] INHALATION [ ] INGESTION [X] SKIN ABSORPTION [ ] EYE [ ] NOT HAZARDOUS

ACUTE EFFECTS

Inhalation: Excessive inhalation of vapors can cause nasal & respiratory irritation, dizziness, weakness, nausea, headache, possible unconsciousness or asphyxiation.

Eye Contact: Irritation.

Skin Contact: Irritation due to defatting of skin.

Ingestion: Possible chemical pneumonitis if aspirated into lungs.

CHRONIC EFFECTS: (Effects due to excessive exposure to the raw materials of this mixture) May cause nausea, diarrhea, vomiting, central nervous system effects.

Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions.

EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention.

Skin Contact: Wash with soap and water. If irritated, seek medical attention.

Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.

Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by NIOSH in a positive pressure mode.

Protective Gloves: Neoprene

Eye Protection: Safety glasses recommended.

Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.

Other Protective Clothing & Equipment: None

Hygienic Work Practices: Wash with soap and water before handling food.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Absorb with suitable medium. Incinerate or landfill according to local, state or federal regulations. DO NOT FLUSH TO SEWER. CAUTION: Silicone makes surfaces slippery.

Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.

Precautions To Be Taken In Handling & Storage: Do not puncture or incinerate containers. Do not store at temperatures above 130°F.

Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN. Avoid food contamination. Remove ignition sources.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

** Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only

MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product number	948-001
Product name	**Heat Stable Silicone Release Agent**
Effective date	25-Oct-2011
Company information	Claire Manufacturing Co. 1005 S. Westgate Drive Addison, IL 60101 United States
Company phone	General Assistance 630-543-7600
Emergency telephone US	800-424-9300
Emergency telephone outside US	703-527-3887
Version #	01

2. Hazards Identification

Emergency overview	FLAMMABLE CONTENTS UNDER PRESSURE. Aerosol. Contact with eyes may cause irritation. Prolonged exposure may cause chronic effects.
Potential health effects	
Routes of exposure	Skin contact. Ingestion.
Eyes	Contact with eyes may cause irritation.
Skin	Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).
Inhalation	Intentional misuse by concentrating and inhaling the product can be harmful or fatal. Prolonged inhalation may be harmful.
Ingestion	Exposure by ingestion of an aerosol is unlikely. May cause delayed lung damage. Components of the product may be absorbed into the body by ingestion.
Target organs	Central nervous system. Lungs. Respiratory system.
Chronic effects	May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. May cause delayed lung damage. Prolonged skin contact may defat the skin and produce dermatitis.
Signs and symptoms	Discomfort in the chest. Narcosis. Defatting of the skin. Irritation.

3. Composition / Information on Ingredients

Components	CAS #	Percent
n-Butane	106-97-8	50 - 60
Propane	74-98-6	20 - 30
Odorless Mineral Spirits	64742-48-9	10 - 15
Non-hazardous and other components below reportable levels		1 - 3

4. First Aid Measures

First aid procedures

Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops or persists.
Skin contact	Remove and isolate contaminated clothing and shoes. Wash off with warm water and soap. Get medical attention if irritation develops or persists. Wash clothing separately before reuse.
Inhalation	If symptoms develop move victim to fresh air. If symptoms persist, get medical attention.
Ingestion	Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician immediately.

5. Fire Fighting Measures

Flammable properties Vapor or gas may spread to distant ignition sources and flash back. Runoff to sewer may cause fire or explosion hazard.

Extinguishing media

Suitable extinguishing media Foam. Dry chemical. Carbon dioxide (CO2). Do not use water jet.

Protection of firefighters

Specific hazards arising from the chemical Fire may produce irritating, corrosive and/or toxic gases.

Protective equipment and precautions for firefighters In the event of fire and/or explosion do not breathe fumes. Containers should be cooled with water to prevent vapor pressure build up.

6. Accidental Release Measures

Methods for containment Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Stop the flow of material, if this is without risk. Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up Should not be released into the environment. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean contaminated surface thoroughly.

7. Handling and Storage

Handling Pressurized container: Do not pierce or burn, even after use. Do not smoke while using or until sprayed surface is thoroughly dry. Do not use if spray button is missing or defective. Wear personal protective equipment. Avoid prolonged exposure.

Storage Level 3 Aerosol.
Contents under pressure. Do not puncture, incinerate or crush. Keep away from heat, sparks, and flame. Avoid exposure to long periods of sunlight. Store in cool place. Keep out of the reach of children. Level 3 Aerosol. Do not store, incinerate, or heat this material above 120 degrees Fahrenheit.

8. Exposure Controls / Personal Protection

Exposure limits

ACGIH

Components	CAS #	TWA	STEL	Ceiling
n-Butane	106-97-8	1000 ppm	Not established	Not established
Propane	74-98-6	1000 ppm	Not established	Not established

OSHA

Material	CAS #	TWA	STEL	Ceiling
Heat Stable Silicone Release Agent	Mixture	15 mg/m3	Not established	Not established

Components				
Propane	74-98-6	1000 ppm	Not established	Not established

Personal protective equipment

Skin protection Wear appropriate chemical resistant gloves. Wear appropriate chemical resistant clothing.

Respiratory protection No personal respiratory protective equipment normally required. If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.

9. Physical & Chemical Properties

Appearance Compressed liquefied gas.

Boiling point 33.8 °F (1.1 °C) estimated

Color	Colorless.
Density	0.5819 g/cm3 estimated
Flammability (HOC)	42.0605 kJ/g estimated
Flash back	Yes
Flash point	-156 °F (-104.4 °C) Propellant
Form	Aerosol.
Freezing point	Not available
Odor	Solvent.
pH	Not applicable
Physical state	Gas.
Pressure	60 - 70 psig @70F
Solubility	Negligible
Specific gravity	0.582

10. Chemical Stability & Reactivity Information

Chemical stability	Risk of ignition.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	None known.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological Information

Acute effects Acute LD50: 18877 mg/kg estimated, Rat, Dermal

Component analysis - LD50

Toxicology Data - Selected LD50s and LC50s

n-Butane	106-97-8	Inhalation LC50 Rat 658 mg/L 4 h
Odorless Mineral Spirits	64742-48-9	Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >3160 mg/kg
Propane	74-98-6	Inhalation LC50 Rat 658 mg/L 4 h

Sensitization Not expected to be hazardous by OSHA criteria.

Teratogenicity Not expected to be hazardous by OSHA criteria.

12. Ecological Information

Ecotoxicity LC50 18333 mg/L, Fish, 96.00 Hours,
Components of this product have been identified as having potential environmental concerns.

13. Disposal Considerations

Waste codes D001: Waste Flammable material with a flash point <140 F

Disposal instructions Contents under pressure. Dispose of this material and its container at hazardous or special waste collection point. Do not incinerate sealed containers. Do not allow this material to drain into sewers/water supplies. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose in accordance with all applicable regulations.

14. Transport Information

Department of Transportation (DOT) Requirements

Basic shipping requirements:

Proper shipping name	Consumer commodity
Hazard class	ORM-D
Subsidiary hazard class	None

Additional information:

Packaging exceptions	156, 306
Packaging non bulk	156, 306
Packaging bulk	None
ERG number	170

IMDG

Basic shipping requirements:	
Proper shipping name	AEROSOLS
Hazard class	2.1
UN number	1950
Additional information:	
Packaging exceptions	LTD QTY
Item	5F
Labels required	None
Transport Category	2

IATA

Basic shipping requirements:	
Proper shipping name	Aerosols, flammable
Hazard class	2.1
UN number	1950
Additional information:	
Packaging exceptions	LTD QTY
Labels required	2.1

15. Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
CERCLA/SARA Hazardous Substances - Not applicable.

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical	Yes

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 302 extremely hazardous substance	No
Section 311 hazardous chemical	Yes
Hazard categories (311/312)	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - Yes Reactivity Hazard - No

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations

U.S. - Pennsylvania - RTK (Right to Know) List

n-Butane	106-97-8	Present
Odorless Mineral Spirits	64742-48-9	Present
Propane	74-98-6	Present

16. Other Information

Further information HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings	Health: 1 Flammability: 4 Physical hazard: 0
Disclaimer	The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
Prepared by	Regulatory Compliance

Silver Nitrate, 1.0N (1.0M)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 07/26/2013 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture

Product name. : Silver Nitrate, 1.0N (1.0M)

Product code : LC22740

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : For laboratory and manufacturing use only.

1.3. Details of the supplier of the safety data sheet

LabChem Inc
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court
Zelienople, PA 16063 - USA
T 412-826-5230 - F 724-473-0647
info@labchem.com - www.labchem.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or 011-703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin Corr. 1B	H314
Eye Dam. 1	H318
Aquatic Acute 2	H401
Aquatic Chronic 2	H411

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :

GHS05 GHS09

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H314 - Causes severe skin burns and eye damage
H411 - Toxic to aquatic life with long lasting effects

Precautionary statements (GHS-US) : P260 - Do not breathe mist, vapours, spray
P264 - Wash exposed skin thoroughly after handling
P273 - Avoid release to the environment
P280 - Wear eye protection, protective gloves
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER/doctor/…
P363 - Wash contaminated clothing before reuse
P391 - Collect spillage
P405 - Store locked up
P501 - Dispose of contents/container to comply with local, state and federal regulations

2.3. Other hazards

Other hazards not contributing to the classification : None.

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

Full text of H-phrases: see section 16

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Water	(CAS No) 7732-18-5	83.01	Not classified
Silver Nitrate	(CAS No) 7761-88-8	16.99	Ox. Sol. 2, H272 Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Causes severe skin burns and eye damage.

Symptoms/injuries after inhalation : May cause respiratory irritation.

Symptoms/injuries after skin contact : May stain the skin.

Symptoms/injuries after eye contact : Causes serious eye damage.

Symptoms/injuries after ingestion : Nausea. Vomiting. Diarrhoea. Blue/grey discolouration of the skin. Methemoglobinemia. Change in urine output.

Symptoms/injuries upon intravenous administration : Not available.

Chronic symptoms : Blue/grey discolouration of the skin. Methemoglobinemia.

4.3. Indication of any immediate medical attention and special treatment needed

Obtain medical assistance.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Reactivity : Thermal decomposition generates : Corrosive vapours.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

No additional information available

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe mist, vapours, spray.
Hygiene measures	:	Wash exposed skin thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	:	Comply with applicable regulations.
Storage conditions	:	Keep only in the original container in a cool, well ventilated place away from : Direct sunlight, incompatible materials. Keep container closed when not in use.
Incompatible products	:	Chlorides. Strong bases. Strong acids.
Incompatible materials	:	Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Silver Nitrate (7761-88-8)		
USA ACGIH	ACGIH TWA (mg/m³)	0.01 mg/m³
USA OSHA	OSHA PEL (TWA) (mg/m³)	0.01 mg/m³

8.2. Exposure controls

Appropriate engineering controls	:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
Personal protective equipment	:	Avoid all unnecessary exposure.
Hand protection	:	Wear protective gloves.
Eye protection	:	Chemical goggles or face shield.
Skin and body protection	:	Wear suitable protective clothing.
Respiratory protection	:	Wear appropriate mask.
Environmental exposure controls	:	Avoid release to the environment.
Other information	:	Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Clear, colorless liquid.
Molecular mass	:	169.87 g/mol
Colour	:	Colourless.
Odour	:	Odourless.
Odour threshold	:	No data available
pH	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Self ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	No data available
Density	:	1 g/ml
Solubility	:	Soluble in water.
Log Pow	:	No data available

Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available.
Oxidising properties	:	No data available.
Explosive limits	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Thermal decomposition generates : Corrosive vapours.

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Chlorides. Strong acids. Strong bases.

10.6. Hazardous decomposition products

Nitrogen oxides. Thermal decomposition generates : Corrosive vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Silver Nitrate (7761-88-8)	
LD50 oral rat	1173 mg/kg (Rat)

Water (7732-18-5)	
LD50 oral rat	≥ 90000 mg/kg

Skin corrosion/irritation	:	Causes severe skin burns and eye damage.
Serious eye damage/irritation	:	Causes serious eye damage.
Respiratory or skin sensitisation	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
Specific target organ toxicity (single exposure)	:	Not classified
Specific target organ toxicity (repeated exposure)	:	Not classified
Aspiration hazard	:	Not classified
Potential Adverse human health effects and symptoms	:	Based on available data, the classification criteria are not met.
Symptoms/injuries after inhalation	:	May cause respiratory irritation.
Symptoms/injuries after skin contact	:	May stain the skin.
Symptoms/injuries after eye contact	:	Causes serious eye damage.
Symptoms/injuries after ingestion	:	Nausea. Vomiting. Diarrhoea. Blue/grey discolouration of the skin. Methemoglobinemia. Change in urine output.
Symptoms/injuries upon intravenous administration	:	Not available.
Chronic symptoms	:	Blue/grey discolouration of the skin. Methemoglobinemia.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Silver Nitrate, 1.0N (1.0M)	
LC50 fishes 1	6.7 mg/l

Silver Nitrate (7761-88-8)	
LC50 fishes 1	0.0039 mg/l (96 h; Pimephales promelas; Flow-through system)
EC50 Daphnia 1	0.0006 mg/l (48 h; Daphnia magna; LOCOMOTOR EFFECT)
LC50 fish 2	0.006 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
EC50 Daphnia 2	0.006 mg/l (48 h; Crangon sp.)
Threshold limit other aquatic organisms 1	0.006 mg/l (Pseudomonas putida; TOXICITY TEST)
Threshold limit algae 1	0.0007 mg/l (Microcystis aeruginosa; TOXICITY TEST)
Threshold limit algae 2	0.0095 mg/l (Scenedesmus quadricauda; TOXICITY TEST)

12.2. Persistence and degradability

Silver Nitrate, 1.0N (1.0M)	
Persistence and degradability	May cause long-term adverse effects in the environment.

Silver Nitrate (7761-88-8)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

Silver Nitrate, 1.0N (1.0M)	
Bioaccumulative potential	Not established.

Silver Nitrate (7761-88-8)	
BCF fish 1	11 - 19 (Micropterus salmoides; CHRONIC)
BCF fish 2	15 - 150 (Lepomis macrochirus; CHRONIC)
Log Pow	0.19 (Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT

14.1. UN number

No dangerous good in sense of transport regulations

14.2. UN proper shipping name

Not applicable

14.3. Additional information

Other information : No supplementary information available.

Overland transport

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Silver Nitrate (7761-88-8)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
RQ (Reportable quantity, section 304 of EPA's List of Lists) :	1 lb

15.2. International regulations

CANADA

Silver Nitrate, 1.0N (1.0M)	
WHMIS Classification	Class E - Corrosive Material

Silver Nitrate (7761-88-8)	
Listed on the Canadian DSL (Domestic Sustances List) inventory.	
WHMIS Classification	Class C - Oxidizing Material Class E - Corrosive Material

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

15.2.2. National regulations

Silver Nitrate (7761-88-8)
Listed on the Canadian Ingredient Disclosure List

15.3. US State regulations

No additional information available

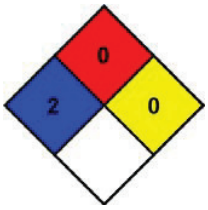
SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — AcuteHazard, Category 1
Aquatic Acute 2	Hazardous to the aquatic environment — AcuteHazard, Category 2
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Ox. Sol. 2	Oxidising Solids, Category 2
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
H272	May intensify fire; oxidiser
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects

NFPA health hazard	: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.
NFPA fire hazard	: 0 - Materials that will not burn.
NFPA reactivity	: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health	: 2 Moderate Hazard - Temporary or minor injury may occur
Flammability	: 0 Minimal Hazard
Physical	: 0 Minimal Hazard
Personal Protection	: C

SDS US (GHS HazCom 2012)

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 692.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Silver Nitrate Solution 0.2M or Less

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Silver nitrate	7761-88-8	$AgNO_3$	169.87	5% or less
Water	7732-18-5	H_2O	18.00	98%+

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Wash with plenty of water (P302+P352). **If skin irritation occurs:** Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Do NOT induce vomiting. Call a physician or poison control IMMEDIATELY.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.
In case of fire: Flood with water. Do NOT use a tri-class dry chemical, carbon dioxide or halon fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. Absorb spills to prevent material damage (P390). See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #3. Store with amides, nitrates, nitrites and azides.
Light sensitive. Store in a Flinn Chem-Saf™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).
Exposure guidelines: (as silver nitrate) PEL/TLV 0.01 mg/m^3 (OSHA, ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless liquid. Odorless.

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Indefinite, but light sensitive. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Diarrhea, cyanosis
Chronic effects: Argyrosis
Target organs: N.A.

ORL-RAT LD_{50}: 1173 mg/kg as silver nitrate
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Toxic to aquatic species.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #11 is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 691.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Silver Nitrate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Oxidizing solids (Category 2). May intensify fire; oxidizer (H272). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Acute toxicity, oral (Category 4). Harmful if swallowed (H302). Do not eat, drink or smoke when using this product (P270).

Hazard class: Skin corrosion or irritation (Category 1). Causes severe skin burns and eye damage (H314).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Silver nitrate	7761-88-8	$AgNO_3$	169.87	

SECTION 4 — FIRST AID MEASURES

Immediately call a POISON CENTER or physician (P310).
If inhaled: Remove victim to fresh air in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If on skin:** Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353). Wash contaminated clothing before reuse (P363).
If swallowed: Rinse mouth. Do NOT induce vomiting (P301+P330+P331). Call a physician or poison control IMMEDIATELY.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid. Oxidizer.
When heated to decomposition, may emit toxic fumes. Reacts with NH_3 to form shock sensitive compounds
In case of fire: Flood with water. Do NOT use a tri-class dry chemical, carbon dioxide or halon fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Do not allow solid to become airborne. Ventilate area and wipe up with wet toweling. Place in sealed bag or container and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #3. Store with amides, nitrates, nitrites and azides.
Light sensitive. Store in a Flinn Chem-Saf™ bag, and lock up in a poison cabinet.
Keep away from combustible materials (P220). Take any precautions to avoid mixing with combustibles (P221).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).
Exposure guidelines: PEL/TLV 0.01 mg/m^3 (OSHA, ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless, transparent, rhombic crystals; turns color on exposure to light in presence of organic materials. Faint nitric acid odor.
Soluble: Water and hot alcohol

Boiling point: 440 ^{o}C (decomposes)
Melting point: 210 ^{o}C
pH: 6
Specific gravity: 4.35

SECTION 10 — STABILITY AND REACTIVITY

Oxidizer. Avoid contact with strong reducers, ammonia, strong bases, alcohols, magnesium.
Shelf life: Indefinite, but light sensitive.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Diarrhea, cyanosis
Chronic effects: Argyrosis
Target organs: N.A.

ORL-RAT LD_{50}: 1173 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Toxic to aquatic species.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #11 is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Silver nitrate. Hazard class: 5.1, Oxidizer. UN number: UN1493.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-853-9), RCRA code D001, D011.

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 693.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

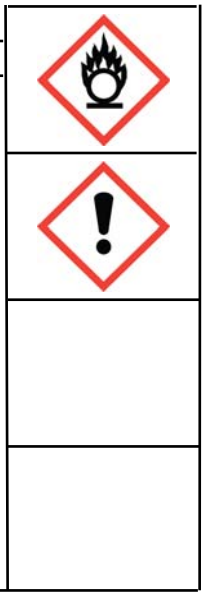
Silver Oxide

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Oxidizing solids (Category 2). May intensify fire; oxidizer (H272). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Silver oxide	20667-12-3	Ag_2O	231.76	

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313)
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. **If in eyes:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313). **If on skin:** Rinse cautiously with water for several minutes (P351).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid. Oxidizer.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Do not allow solid to become airborne. Ventilate area and wipe up with wet toweling. Place in sealed bag or container and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates.
Light sensitive. Store in a cool, dry place away from light. Keep away from combustible materials (P220). Take any precautions to avoid mixing with combustibles (P221).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, eye protection, and face protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Dark brown or black powder. Odorless.
Soluble: Ammonium hydroxide, nitric acid, and sodium thiosulfate solutions. Slightly in water. Insoluble in alcohol.

Melting point: 200 ^{o}C (decomposes)
Specific gravity: 7.2

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers, strong acids, ammonia, amines, and organic materials.
Shelf life: Indefinite, but light sensitive. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritating dust
Chronic effects: Argyrosis
Target organs: N.A.

ORL-RAT LD_{50}: 2820 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (243-957-1), RCRA code D011.

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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Material Safety Data Sheet: **Simple Green® All-Purpose Cleaner**
Simple Green® Scrubbing Pad
Version No. 1300508B Date of Issue: November 2008 *ANSI-Z400.1-2003 Format*

Section 1: PRODUCT & COMPANY IDENTIFICATION

Product Name: Simple Green® All-Purpose Cleaner
Simple Green® Scrubbing Pad
Additional Name: Simple Green® Concentrated Cleaner/Degreaser/Deodorizer

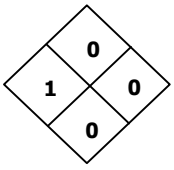
Manufacturer's Product Code Numbers: **Please refer to page 4*

Company: Sunshine Makers, Inc.
15922 Pacific Coast Highway
Huntington Harbour, CA 92649 USA
Telephone: 800-228-0709 ● 562-795-6000 Fax: 562-592-3830
Emergency Phone: Chem-Tel 24-Hour Emergency Service: 800-255-3924

Use of Product: An all purpose cleaner and degreaser used diluted in water for direct, spray and dip tank procedures. Scrubbing pad is used with water for manual scrubbing applications. Both are for cleaning water-safe surfaces.

Section 2: HAZARDS IDENTIFICATION

Emergency Overview: CAUTION. Mild eye irritant.
Simple Green@ is a dark green liquid with a sassafras odor. Scrubbing Pad is a green fibrous rectangle.



HMIS Rating:
Health = 1 = slight
Fire = 0
Reactivity, and Special = 0 = minimal

Eye Contact: Mild Eye Irritant.

Skin Contact: No adverse effects expected under typical use conditions. Prolonged exposure may cause dryness. Under this condition, use of gloves or skin moisturizer after washing may be indicated.

Ingestion: May cause stomach or intestinal upset if swallowed (due to detersive properties.)

Inhalation: No adverse effects expected under typical use conditions. Adequate ventilation should be present when using Simple Green® over a prolonged period of time. Open windows or ventilate via fan or other air-moving equipment if necessary.

Carcinogens: No ingredients are listed by OSHA, IARC, or NTP as known or suspected carcinogens.

Medical Conditions: No medical conditions are known to be aggravated by exposure to Simple Green®. Dermal-sensitive users may experience mild but reversible reactions.

UN Number: Not Required **Dangerous Goods Class:** Non-hazardous

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

The only ingredient of Simple Green® with established exposure limits is undiluted 2-butoxyethanol (<4%) (Butyl Cellosolve; CAS No. 111-76-2) [*1% for Scrubbing Pad*]: the ACGIH TLV-TWA is 20 ppm (97 mg/m^3). Based upon chemical analysis, Simple Green® contains no known EPA priority pollutants, heavy metals or chemicals listed under RCRA, CERCLA, or CWA. Analysis by TCLP (Toxicity Characteristic Leaching Procedure) according to RCRA revealed no toxic organic or inorganic constituents.

All components of Simple Green® are listed on the TSCA Chemical Substance Inventory.
This product does not contain any ingredients covered by the provisions of 29 CFR 1910.1200.

Section 4: FIRST AID MEASURES

Eye Contact: Reddening may develop. Immediately rinse the eye with large quantities of cool water; continue 10-15 minutes or until the material has been removed; be sure to remove contact lenses, if present, and to lift upper and lower lids during rinsing. Get medical attention if irritation persists.

Skin Contact: Minimal effects, if any; rinse skin with water, rinse shoes and launder clothing before reuse. Reversible reddening may occur in some dermal-sensitive users; thoroughly rinse area and get medical attention if reaction persists.

Swallowing; Essentially non-toxic. Give several glasses of water to dilute; do not induce vomiting. If stomach upset occurs, consult physician.

Inhalation: Non-toxic. Exposure to concentrate may cause mild irritation of nasal passages or throat; remove to fresh air. Get medical attention if irritation persists.

Section 5: FIRE FIGHTING MEASURES

Simple Green® is stable, not flammable, and will not burn. No special procedures required.

Flash Point/Auto-Ignition: Not flammable.
Flammability Limits: Not flammable.
Extinguishing Media: Not flammable/non-explosive.
Special Fire Fighting Procedures: None required.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid contact with eyes. Do not rub eyes with hands during cleanup. No special precautions for dermal contact are needed. Wash hands thoroughly after cleaning up spill or leak.

Method for cleaning up: Recover usable material by convenient method, residual may be removed by wipe or wet mop. If necessary, unrecoverable material may be washed to drain with large quantities of water.

Section 7: HANDLING AND STORAGE

No Special precautions are required. **This product is non-hazardous for storage and transport according to the U.S. Department of Transportation Regulations.** Simple Green® requires no special labeling or placarding to meet U.S. Department of Transportation requirements.

UN Number: Not Required **Dangerous Goods Class:** Non-hazardous

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits: The Simple Green® formulation presents no health hazards to the user when used according to label directions for its intended purposes. Mild skin and eye irritation is possible (please see Eye contact and Skin contact in section IV.) No special precautionary measures required under normal use conditions.

Ventilation: No special ventilation, precautions or respiratory protection is required during normal use. Large-scale use indoors should provide an increased rate of air exchange.

Human Health Effects or Risks From Exposure: Adverse effects on human health are not expected from Simple Green®, based on 20 years of use of Simple Green® without reported adverse health incidence in diverse population groups, including extensive use by inmates of U.S. Federal prisons in cleaning operations.

Eye protection: Simple Green® is a mild eye irritant; mucous membranes may become irritated by concentrate. Eye protection not generally required. Wash hands after using wipes.

Skin protection: Simple Green® is not likely to irritate the skin in the majority of users. Repeated daily application to the skin without rinsing, or continuous contact on the skin may lead to temporary, but reversible, irritation. Rinse completely from skin after contact.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION – continued –

General hygiene conditions: There are no known hazards associated with this material when used as recommended. The following general hygiene considerations are recognized as common good industrial hygiene practices:

- Avoid breathing vapor or mist.
- Avoid contact with eyes.
- Wash thoroughly after handling and before eating, drinking, or smoking.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Odor: Cleaner is a dark green liquid, pad is a fibrous green matrix; both exhibit a sassafras odor.			
Specific Gravity:	1.010 ± 0.010	**Vapor Pressure:**	18 mm Hg @ 20°C; 23.5 mmHg @ 26°C
Evaporation:	>1 (butyl acetate = 1)	**Vapor Density:**	1.3 (air = 1)
Water Solubility:	100%	**Density:**	8.5 lbs/gallon
Boiling Point:	100.6°C (212°F)	**pH:**	9.5 ± 0.3
Ash Content:	At 600°F: 1.86% by weight	**Nutrient Content:** Phosphorus: 0.3% by formula Nitrogen <1.0% by weight (fusion and qualitative test for ammonia) Sulfur: 0.6% by weight (barium chloride precipitation method)	
Freezing Point: Approx -9 °C (16 °F) *If product freezes, it will reconstitute without loss of efficacy when brought back to room temperature and agitated.*			
VOC Composite Partial Pressure: 0.006 mmHg @ 20°C			
Volatile Organic Compounds (VOCs): CARB Method 310 3.8% SCAQMD Method 313 2.8%	Cleaner meets CARB & BAAQMD regulations. Cleaner must be diluted 1:1 with water to Meet SCAQMD Rule 1171 & Rule 1122 VOC requirements for solvent cleaning operations. [*Scrubber VOCs = 3.3% prior to dilution w/water*]		

Section 10: STABILITY AND REACTIVITY

Stability: Stable
Materials to Avoid: None known
Hazardous Decomposition Products: None expected

Section 11: TOXICOLOGICAL INFORMATION

Toxicology information is based on chemical profile of ingredients and extrapolation of data from similar formulas.

Acute Toxicity: Oral LD_{50} (rat) >5 g/kg body weight*
Dermal LD_{50} (rabbit) >2 g/kg body weight

**Calculation from OECD series on testing and assessment number 33, Chapter 3.2*

Eye Irritation: Moderate/Mild reversible eye irritation may occur based on relevant laboratory studies. This potential is reduced by immediate rinsing of eyes in case of eye contact.

Dermal Irritation: Mild, reversible skin irritation may occur based on relevant laboratory studies. A 6-hour exposure to human skin under a patch did not produce irritation

Repeat Exposure Via Skin Contact: Based on relevant laboratory studies, no toxic effects are expected to be associated with daily skin exposures (with up to 2 g/kg/day tested for 13 weeks on rabbits). Skin irritation may, however, occur with repeated or prolonged exposures.

Reproductive Effects Assessment: Based on relevant laboratory studies (CD-1 mouse 18-week fertility assessment continuous breeding), no adverse effects on reproduction, fertility, or health of offspring are expected.

Section 12: ECOLOGICAL INFORMATION

Hazard to wild animals & aquatic organisms: Low, based on toxicological profile.

Biodegradability: Readily biodegradable based on biodegradation profile,
PRO/FT CBT-AC 014-7 "Ready Biodegradability: Closed Bottle Test" OECD, and OECD 302B laboratory tests

Environmental Toxicity Information: It is important not to allow the runoff from cleaning into closed systems such as decorative ponds. Always protect closed systems with tarps or dikes if necessary.

Section 13: DISPOSAL CONSIDERATIONS

Dispose of in accordance with all applicable local, state and federal laws. Dispose of used or unused product, and empty containers in accordance with the local, State, Provincial, and Federal regulations for your location. Never dispose of used degreasing rinsates into lakes, streams, and open bodies of water or storm drains.

Section 14: TRANSPORT INFORMATION

This product is non-hazardous for transport according to the U.S. Department of Transportation Services
UN Number: Not required Dangerous Goods Class: Non-hazardous

Section 15: REGULATORY INFORMATION

*Reportable components:

All components are listed on:	EINECS and TSCA Inventory		
No components listed under:	Clean Air Act Section 112		
SARA:	This material contains 2-Butoxyethanol, < 4%, (CAS# 111-76-2) which is subject to the reporting requirements of Section 313 of SARA Title III and 49 CFR Part 373.		
RCRA Status:	Not a hazardous waste.	CERCLA Status:	No components listed
TSCA TRI Reporting:	Not required / Not listed	CA PROP. 65 Status:	No components listed

Section 16: OTHER INFORMATION

Questions about the information found on this MSDS should be directed to:
SUNSHINE MAKERS, INC. – TECHNICAL DEPARTMENT
15922 Pacific Coast Hwy. Huntington Harbour, CA 92649

Phone: 800/228-0709 [8am-5pm Pacific time, Mon-Fri] *Fax:* 562/592-3830 *Email:* infoweb@simplegreen.com

CAGE CODE 1Z575
GSA/FSS - CONTRACT NO. GS-07F-0065J
National Stock Numbers & Industrial Part Numbers:

	Part Number	NSN	Size
Simple Green	13012	7930-01-342-5315	24 oz spray (12/case)
	13005	7930-01-306-8369	1 Gallon (6/case)
	13006	7930-01-342-5316	5 Gallon
	13016	7930-01-342-5317	15 Gallon
	13008	7930-01-342-4145	55 Gallon
Scrubbing Pad	Part Number	NSN	Size
	10224	7930-01-346-9148	Each (24/case)

Retail Numbers:

Part Number	Size
13002	16 oz Trigger (12/case)
13005	1 Gallon (6/case)
13013	24 oz Trigger (12/case)
13014	67 oz / 2 L (6/case)
13033	32 oz Trigger (12/case)

** part number is for both industrial and retail*

****International Part Numbers May Differ.**

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Section 1: IDENTIFICATION

Product Name: Simple Green® Foaming Coil Cleaner
Additional Names:

Manufacturer's Part Number: **Please refer to Section 16*

Recommended Use: Cleaner and degreaser formulated to safely remove, oil, grease, and grime.
Restrictions on Use: Do not use on non-rinsable or asphalt surfaces

Company: Sunshine Makers, Inc.
15922 Pacific Coast Highway
Huntington Beach, CA 92649 USA
Telephone: 800-228-0709 ● 562-795-6000 *Mon – Fri, 8am – 5pm PST*
Fax: 562-592-3830
Email: info@simplegreen.com
Emergency Phone: Chem-Tel 24-Hour Emergency Service: 800-255-3924

Section 2: HAZARDS IDENTIFICATION

This product is considered hazardous (Eye Corrosive/Irritant – Category 2B) by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

OSHA HCS 2012
Label Elements
Signal Word: Warning **Hazard Symbol(s)/Pictogram(s):** None required

Hazard Statements:
H320 – Causes Eye Irritation.

Precautionary Statements:
P264 – Wash hands thoroughly after handling.
P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 – If eye irritation persists: Get medical advice.

Hazards Not Otherwise Classified (HNOC): No hazards not otherwise classified were identified

Other Information: None Known.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS Number	Percent Range
Water	7732-18-5	> 68%*
Triethanolamine	102-71-6	< 15%*
Ethoxylated Alcohol	68439-46-3	< 10%*
Propylene Glycol Butyl Ether	5131-66-8	< 5%*
Tetrapotassium Pyrophosphate	7320-34-5	< 1%*
Potassium Silicate	1312-76-1	< 1%*

**specific percentages of composition are being withheld as a trade secret*

Section 4: FIRST-AID MEASURES

Inhalation: Not expected to cause respiratory irritation. If adverse effect occurs, move to fresh air.
Skin Contact: Not expected to cause skin irritation. If adverse effect occurs, rinse skin with water.
Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice.
Ingestion: May cause upset stomach. Drink plenty of water to dilute. See section 11.

Most Important Symptoms/Effects, Acute and Delayed: None known.

Indication of Immediate Medical Attention and Special Treatment Needed, if necessary: Treat symptomatically

Section 5: FIRE-FIGHTING MEASURES

Suitable & Unsuitable Extinguishing Media: Use Dry chemical, CO2, water spray or "alcohol" foam. Avoid high volume jet water.
Specific Hazards Arising from Chemical: In event of fire, fire created carbon oxides and oxides of phosphorus may be formed.
Special Protective Actions for Fire-Fighters: Wear positive pressure self-contained breathing apparatus; Wear full protective clothing.

This product is non-flammable. See Section 9 for Physical Properties.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:
For non-emergency personnel: See section 8 – personal protection.
For emergency responders: Avoid eye contact. *S*afety goggles suggested if splashing or misting is likely to occur.

Environmental Precautions: Do not allow into open waterways and ground water systems.

Methods and Materials for Containment and Clean Up: Dike or soak up with inert absorbent material. See section 13 for disposal considerations.

Section 7: HANDLING AND STORAGE

Precautions for Safe Handling: Ensure adequate ventilation. Keep out of reach of children. Keep away from heat, sparks, open flame and direct sunlight. Do not pierce any part of the container. Do not mix or contaminate with any other chemical. Do not eat, drink or smoke while using this product.

Conditions for Safe Storage including Incompatibilities: Keep container tightly closed. Keep in cool dry area. Avoid prolonged exposure to sunlight. Do not store at temperatures above 109°F (42.7°C). If separation occurs, mix the product for reconstitution.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limit Values:			
	Triethanolamine (102-71-6)	5 mg/m^3 PEL	California
	Diethanolamine (111-42-2)	3 ppm TWA; 15 mg/m^3 TWA	Connecticut, Michigan, Minnesota, OSHA, Tennessee, Vermont, Washington
		0.46 ppm PEL; 2 mg/m^3 PEL	California
		6 ppm STEL	Washington

Appropriate Engineering Controls: Showers, eyewash stations, ventilation systems

Individual Protection Measures / Personal Protective Equipment (PPE)
Eye Contact: Use protective glasses or safety goggles if splashing or spray-back is likely.
Respiratory: Use in well ventilated areas or local exhaust ventilations when cleaning small spaces.
Skin Contact: Use protective gloves (any material) when used for prolonged periods or dermally sensitive.
General Hygiene Considerations: Wash thoroughly after handling and before eating or drinking.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear Liquid
Odor: No added odor
Odor Threshold: Not determined
pH: 10 – 11.7
Freezing Point: 0°C (32°F)
Boiling Point & Range: 98°C (210°F)
Flash Point: > 212°F
Evaporation Rate: Not determined
Flammability (solid, gas): Not applicable
Upper/Lower Flammability or Explosive Limits: Not applicable

Partition Coefficient: n-octanol/water: Not determined
Autoignition Temperature: Non-flammable
Decomposition Temperature: 109°F
Viscosity: Like water
Specific Gravity : 1.01 – 1.04
VOCs: ***Water & fragrance exemption in calculation*

SCAQMD 304-91 / EPA 24:	Not tested		
CARB Method 310**:	20 g/L	0.1667 lb/gal	2.0%
SCAQMD Method 313:	20.4 g/L	0.1702 lb/gal	2.04%

VOC Composite Partial Pressure: 0.102207135

Section 9: PHYSICAL AND CHEMICAL PROPERTIES - continued

Vapor Pressure :	20.7 mmHg	**Nutrient Content:**	
Vapor Density:	Not determined	Nitrogen -	<0.1% (0% by formula)
Relative Density:	8.34 – 8.67 lb/gal	Phosphorous -	< 0.25% (by formula)
Solubility:	100% in water	Sulfur -	<0.1% (0% by formula)

Section 10: STABILITY AND REACTIVITY

Reactivity: Non-reactive.
Chemical Stability: Stable under normal conditions 70°F (21°C) and 14.7 psig (760 mmHg).
Possibility of Hazardous Reactions: None known.
Conditions to Avoid: Excessive heat or cold.
Incompatible Materials: Do not mix with oxidizers, acids, bathroom cleaners, or disinfecting agents.
Hazardous Decomposition Products: Normal products of combustion - CO, CO2, oxides of phosphorus.

Section 11: TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:
Inhalation - Overexposure may cause headache.
Skin Contact - Not expected to cause irritation.
Eye Contact - Causes minimal/mild eye irritation.
Ingestion - May cause upset stomach.

Symptoms related to the physical, chemical and toxicological characteristics: no symptoms expected under typical use conditions.
Delayed and immediate effects and or chronic effects from short term exposure: no symptoms expected under typical use conditions.
Delayed and immediate effects and or chronic effects from long term exposure: headache, dry skin, or skin irritation may occur.
Interactive effects: Not known.

Numerical Measures of Toxicity

Acute Toxicity:
Oral LD_{50} (rat) > 5 g/kg body weight
Dermal LD_{50} (rabbit) > 5 g/kg body weight
Calculated via OSHA HCS 2012 / Globally Harmonized System of Classification and Labelling of Chemicals

Skin Corrosion/Irritation: Non-irritant per Dermal Irritection® assay modeling. *No animal testing performed.*
Eye Damage/Irritation: Minimal/Mild irritant per Ocular Irritection® assay modeling. *No animal testing performed.*
Germ Cell Mutagenicity: Mixture does not classify under this category.
Carcinogenicity: Volume of ingredients does not trigger or classify under this category. This product contains trace amounts of Diethanolamine (IARC 2B and ACGIH A3)
Reproductive Toxicity: Mixture does not classify under this category.
STOT-Single Exposure: Mixture does not classify under this category.
STOT-Repeated Exposure: Mixture does not classify under this category.
Aspiration Hazard: Mixture does not classify under this category.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: Volume of ingredients used does not trigger toxicity classifications under the Globally Harmonized System of Classification and Labelling of Chemicals.
Aquatic: Not tested on finished formulation.
Terrestrial: Not tested on finished formulation.

Persistence and Degradability: Readily Biodegradable per OECD 301D, closed bottle test
Bioaccumulative Potential: No data available.
Mobility in Soil: No data available.
Other Adverse Effects: No data available.

Section 13: DISPOSAL CONSIDERATIONS

Unused or Used Liquid: May be considered hazardous in your area depending on usage and tonnage of disposal – check with local, regional, and or national regulations for appropriate methods of disposal.

Empty Containers: May be offered for recycling.

Never dispose of used degreasing rinsates into lakes, streams, and open bodies of water or storm drains.

Section 14: TRANSPORT INFORMATION

U.N. Number:	Not applicable	**U.N. Proper Shipping Name:**	Cleaning Compound, Liquid NOI
Transport Hazard Class(es):	Not applicable	**NMFC Number:**	48580-3
Packing Group:	Not applicable	**Class:**	55
Environmental Hazards:	Marine Pollutant - NO		

Transport in Bulk (according to Annex II of MARPOL 73/78 and IBC Code): Unknown.
Special precautions which user needs to be aware of/comply with, in connection with transport or conveyance either within or outside their premises: None known.

U.S. (DOT) / Canadian TDG:	Not Regulated for shipping.	**ICAO/ IATA:**	Not classified as Hazardous
IMO / IDMG:	Not classified as Hazardous	**ADR/RID:**	Not classified as Hazardous

Section 15: REGULATORY INFORMATION

All components are listed on: TSCA and DSL Inventory.

SARA Title III: Sections 311/312 – Not applicable.
Sections 313 Superfunds Amendments and Reauthorizations Act of 1986 – Diethanolamine (111-42-2) < 0.01%
Sections 302 – Not applicable.

Clean Air Act (CAA): Triethanolamine (102-71-6), Diethanolamine (111-42-2), Propylene Glycol Butyl Ether (5131-66-8)
Clean Water Act (CWA): Not applicable
CERCLA: Diethanolamine (111-42-2) 100 lb RQ

State Right To Know Lists:	Triethanolamine (102-71-6)	Massachusetts, New Jersey, Pennsylvania
	Diethanolamine (111-42-2)	Massachusetts, New Jersey, Pennsylvania
CA Proposition 65:	Diethanolamine (111-42-2)	< 0.01%

Texas ESL:

Triethanolamine	102-71-6	5 µg/m³ long term	50 µg/m³ short term
Ethoxylated Alcohol	68439-46-3	60 µg/m³ long term	600 µg/m³ short term
Propylene Glycol Butyl Ether	5131-66-8	73 µg/m³ long term	730 µg/m³ short term
Tetrapotassium Pyrophosphate	7320-34-5	5 µg/m³ long term	50 µg/m³ short term
Potassium Silicate	1312-76-1		5 µg/m³ short term
Diethanolamine	111-42-2	1 µg/m³ long term	10 µg/m³ short term

Section 16: OTHER INFORMATION

Size	Item Number	UPC
1 Gallon	0100000104001	043318002434
1 Gallon, 4 per case	0110000404001 & 0180100404001	043318002434
5 Gallon	0100000104005	043318002588
55 Gallon	0100000104055 & 0180100104055	043318002595
275 Gallon	0100000104275 & 0180100104275	043318002601

USA part numbers listed only. Not all part numbers listed. USA part numbers may not be valid for international sale.

Section 16: OTHER INFORMATION - continued

NFPA:

Health – Eye Irritant
Flammability – Non-flammable
Stability – Stable
Special - None

Acronyms

NTP	National Toxicology Program	IARC	International Agency for Research on Cancer
OSHA	Occupational Safety and Health Administration	CPSC	Consumer Product Safety Commission
TSCA	Toxic Substances Control Act	DSL	Domestic Substances List

Prepared / Revised By: Sunshine Makers, Inc., Regulatory Department.
This SDS has been revised in the following sections: Clarified ingredient percentage, cleaned up document

DISCLAIMER: The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

MATERIAL SAFETY DATA SHEET

Simpleset Pre-Mixed Stone, Porcelain &
Ceramic Tile Thin-Set Mortar

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name:	Simpleset Pre-Mixed Stone, Porcelain & Ceramic Tile Thin-Set Mortar
Product Use:	Mortar.
Manufacturer/Supplier:	Custom Building Products 13001 Seal Beach Blvd Seal Beach, CA 90740
Phone Number:	(562) 598-8808
Emergency Phone:	INFOTRAC 1-800-535-5053 (US and Canada) INTERNATIONAL + 1-352-323-3500
Date of Preparation:	March 21, 2011 **Revision Date:** October 9, 2012

Section 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION

MAY CAUSE EYE IRRITATION. MAY CAUSE SKIN IRRITATION.

Potential Health Effects: See Section 11 for more information.

Likely Routes of Exposure: Skin contact, skin absorption, eye contact, inhalation, and ingestion.

Eye: May cause eye irritation.

Skin: May cause skin irritation.

Ingestion: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

Inhalation: May cause respiratory tract irritation.

Chronic Effects: Prolonged or repeated contact may dry skin and cause irritation.

Signs and Symptoms: Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

Medical Conditions Aggravated By Exposure: Because of its irritating properties, product may aggravate preexisting skin, eye, and respiratory conditions.

Target Organs: Skin, eyes, gastrointestinal tract and respiratory system.

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential Environmental Effects: May cause long-term adverse effects in the aquatic environment. See Section 12 for more information.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS #	Wt. %
Calcium carbonate	1317-65-3	15 - 40
Silica, crystalline, quartz	14808-60-7	10 - 30
Stoddard solvent	8052-41-3	1 - 5
Ethylene glycol	107-21-1	1 - 5
Titanium dioxide	13463-67-7	0.1 - 1
Ethyl acrylate	140-88-5	< 0.1

Section 4: FIRST AID MEASURES

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes, including under lids. If easy to do, remove contact lenses, if worn. Get medical attention immediately.

Skin Contact: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops and persists.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion: Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Seek medical attention or call poison control.

General Advice: In case of accident or if you feel unwell, seek medical advice immediately (show the label or MSDS where possible).

Note to Physicians: Symptoms may not appear immediately.

Section 5: FIRE FIGHTING MEASURES

Flammability: Not flammable by WHMIS/OSHA criteria.

Means of Extinction:

Suitable Extinguishing Media: Powder, water spray, foam, carbon dioxide.

Unsuitable Extinguishing Media: Not available.

Products of Combustion: May include, and are not limited to: oxides of carbon.

Explosion Data:

Sensitivity to Mechanical Impact: Not available.

Sensitivity to Static Discharge: Not available.

Protection of Firefighters: Containers may explode when heated. Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental Precautions: Keep out of drains, sewers, ditches, and waterways. Minimize use of water to prevent environmental contamination.

Methods for Containment: Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for Clean-Up: Scoop up material and place in a disposal container.

Other Information: Not available.

Section 7: HANDLING AND STORAGE

Handling:
Avoid contact with skin and eyes. Do not swallow. Do not breathe gas/fumes/vapor/spray. Use only in well-ventilated areas. Launder contaminated clothing before reuse. When using do not eat or drink. Wash hands before eating, drinking, or smoking.

Storage:
Keep out of the reach of children. Keep container tightly closed in a cool place. Keep from freezing.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

	Exposure Limits	
Ingredient	**OSHA-PEL**	**ACGIH-TLV**
Calcium carbonate	15 mg/m³ (total); 5 mg/m³ (resp)	10 mg/m³
Silica, crystalline, quartz	((10 mg/m^3)/(%SiO_2+2) TWA (resp)); ((30 mg/m^3)/(%SiO_2+2) TWA (total)); ((250)/(%SiO_2+5) mppcf TWA (resp))	0.025 mg/m³
Stoddard solvent	100 ppm	100 ppm
Ethylene glycol	Not available.	50 ppm
Titanium dioxide	10 mg/m³	10 mg/m³
Ethyl acrylate	5 ppm	5 ppm

Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Personal Protective Equipment:

Eye/Face Protection: Wear eye/face protection.

Hand Protection: Wear suitable gloves.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment.

General Hygiene Considerations: Handle according to established industrial hygiene and safety practices.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Paste-like compound.
Color:	White or Gray.
Odor:	Mild acrylic odor.
Odor Threshold:	Not available.
Physical State:	Paste.
pH:	8.5-9.5
Viscosity:	450k-520k cps.

Freezing Point:	~ 0ºC (~ 32ºF).
Boiling Point:	Not available.
Flash Point:	Not available.
Evaporation Rate:	Not available.
Lower Flammability Limit:	Not available.
Upper Flammability Limit:	Not available.
Vapor Pressure:	Not available.
Vapor Density:	Not available.
Relative Density:	~ 1.9 g/mL.
Solubility in Water:	Partially Miscible.
Coefficient of Water/Oil Distribution:	Not available.
Auto-ignition Temperature:	Not available.
Percent Volatile:	~ 15 %.
VOC content:	41 g/L (Calculated).

Section 10: STABILITY AND REACTIVITY

Stability: Stable under normal storage conditions.

Conditions of Reactivity: Heat. Incompatible materials.

Incompatible Materials: Strong oxidizers.

Hazardous Decomposition Products: May include, and are not limited to: oxides of carbon.

Possibility of Hazardous Reactions: No dangerous reaction known under conditions of normal use.

Section 11: TOXICOLOGY INFORMATION

EFFECTS OF ACUTE EXPOSURE

Component Analysis

Ingredient	LD_{50} (oral)	LC_{50}
Calcium carbonate	6450 mg/kg, rat	Not available.
Silica, crystalline, quartz	500 mg/kg, rat	Not available.
Stoddard solvent	> 5000 mg/kg, rat	> 5500 mg/m³ 4hr, rat
Ethylene glycol	4000 mg/kg, rat	> 200 mg/m³ 4hr, rat
Titanium dioxide	> 10000 mg/kg, rat	Not available.
Ethyl acrylate	800 mg/kg, rat	1414 ppm 4hr, rat

Eye: May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Skin: May cause skin irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

Ingestion: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

Inhalation: May cause respiratory tract irritation.

EFFECTS OF CHRONIC EXPOSURE

Target Organs: Not available.

Chronic Effects: Hazardous by WHMIS/OSHA criteria.

Carcinogenicity: Hazardous by WHMIS/OSHA criteria.

Ingredient	Chemical Listed as Carcinogen or Potential Carcinogen *
Calcium carbonate	Not listed.
Silica, crystalline, quartz	G-A2, I-1, N-1, CP65
Stoddard solvent	Not listed.
Ethylene glycol	G-A4
Titanium dioxide	G-A4, I-2B
Ethyl acrylate	G-A4, I-2B, CP65

* See Section 15 for more information.

Mutagenicity: Not hazardous by WHMIS/OSHA criteria.

Reproductive Effects: Not hazardous by WHMIS/OSHA criteria.

Developmental Effects:

Teratogenicity: Hazardous by WHMIS/OSHA criteria.

Embryotoxicity: Hazardous by WHMIS/OSHA criteria.

Respiratory Sensitization: Not hazardous by WHMIS/OSHA criteria.

Skin Sensitization: Not hazardous by WHMIS/OSHA criteria.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: May cause long-term adverse effects in the aquatic environment.

Persistence / Degradability: Not available.

Bioaccumulation / Accumulation: Not available.

Mobility in Environment: Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions:
This material must be disposed of in accordance with all local, state, provincial, and federal regulations. Do not empty into drains.

Section 14: TRANSPORTATION INFORMATION

DOT Classification
Not regulated

TDG Classification
Not regulated

Section 15: REGULATORY INFORMATION

Federal Regulations

Canadian: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

US: MSDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200).

SARA Title III

Ingredient	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313
Calcium carbonate	Not listed.	Not listed.	Not listed.	Not listed.
Silica, crystalline, quartz	Not listed.	Not listed.	Not listed.	Not listed.
Stoddard solvent	Not listed.	Not listed.	Not listed.	Not listed.
Ethylene glycol	Not listed.	Not listed.	5,000	313
Titanium dioxide	Not listed.	Not listed.	Not listed.	Not listed.
Ethyl acrylate	Not listed.	Not listed.	1,000	313

State Regulations

California Proposition 65:
This product contains chemicals known to the state of California to cause cancer.

Global Inventories

Ingredient	Canada DSL/NDSL	USA TSCA
Calcium carbonate	NDSL	Yes.
Silica, crystalline, quartz	DSL	Yes.
Stoddard solvent	DSL	Yes.
Ethylene glycol	DSL	Yes.
Titanium dioxide	DSL	Yes.
Ethyl acrylate	DSL	Yes.

All ingredients are on DSL/NDSL and TSCA inventories or are exempt from listing.

HMIS - Hazardous Materials Identification System

Health - 1* **Flammability -** 0 **Physical Hazard -** 0 **PPE –** B

NFPA - National Fire Protection Association:

Health - 1 **Fire -** 0 **Reactivity -** 0

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

WHMIS Classification(s):
Class D2A - Carcinogenicity
Class D2A - Teratogenicity and Embryotoxicity
Class D2B - Chronic Toxic Effects
Class D2B - Skin/Eye Irritant

WHMIS Hazard Symbols:

SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

OSHA (O) Occupational Safety and Health Administration.

ACGIH (G) American Conference of Governmental Industrial Hygienists.
A1 - Confirmed human carcinogen.
A2 - Suspected human carcinogen.
A3 - Animal carcinogen.
A4 - Not classifiable as a human carcinogen.
A5 - Not suspected as a human carcinogen.

IARC (I) International Agency for Research on Cancer.
1 - The agent (mixture) is carcinogenic to humans.
2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

NTP (N) National Toxicology Program.
1 - Known to be carcinogens.
2 - Reasonably anticipated to be carcinogens.

Section 16: OTHER INFORMATION

Disclaimer:
The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

Expiry Date: October 9, 2015

Version #: 1.1

Prepared by: Nexreg Compliance Inc.
Phone: (519) 488-5126
www.nexreg.com

DOD Hazardous Materials Information System

DoD 6050.5-L

AS OF July 1998

FSC: 8030
NIIN: 00N057275
Manufacturer's CAGE: GAMMA
Part No. Indicator: A
Part Number/Trade Name: SKID TEX
==========

General Information
==========
Item Name:
Company's Name: GAMMA LABS, INC
Company's Street: 840 ARROYO AVE
Company's P. O. Box:
Company's City: SAN FERNANDO
Company's State: CA
Company's Country: US
Company's Zip Code: 91340
Company's Emerg Ph #: 818-365-7500
Company's Info Ph #: 818-365-7500
Distributor/Vendor # 1:
Distributor/Vendor # 1 Cage:
Distributor/Vendor # 2:
Distributor/Vendor # 2 Cage:
Distributor/Vendor # 3:
Distributor/Vendor # 3 Cage:
Distributor/Vendor # 4:
Distributor/Vendor # 4 Cage:
Safety Data Action Code:
Safety Focal Point: N
Record No. For Safety Entry: 001
Tot Safety Entries This Stk#: 001
Status: SMJ
Date MSDS Prepared: 13DEC93
Safety Data Review Date: 02FEB95
Supply Item Manager:
MSDS Preparer's Name: LOWELL NORENBERG
Preparer's Company: SAME
Preparer's St Or P. O. Box:
Preparer's City:
Preparer's State:
Preparer's Zip Code:

Other MSDS Number:
MSDS Serial Number: BWQLV
Specification Number:
Spec Type, Grade, Class:
Hazard Characteristic Code:
Unit Of Issue:
Unit Of Issue Container Qty:
Type Of Container:
Net Unit Weight:

Report for NIIN: 00N057275

NRC/State License Number:
Net Explosive Weight:
Net Propellant Weight-Ammo:
Coast Guard Ammunition Code:
==========
Ingredients/Identity Information
==========
Proprietary: NO
Ingredient: PERLITE: COMPOSED OF INGS 2-4
Ingredient Sequence Number: 01
Percent: N/K
Ingredient Action Code:
Ingredient Focal Point: N
NIOSH (RTECS) Number: SD5254000
CAS Number: 93763-70-3
OSHA PEL: 15 MG/M3 TDUST
ACGIH TLV: 10 MG/M3 TDUST
Other Recommended Limit: N/K

Proprietary: NO
Ingredient: SODIUM POTASSIUM ALUMINUM SILICATE
Ingredient Sequence Number: 02
Percent: N/K
Ingredient Action Code:
Ingredient Focal Point: N
NIOSH (RTECS) Number: 1006481SP
CAS Number:
OSHA PEL: N/K (FP N)
ACGIH TLV: N/K (FP N)
Other Recommended Limit: N/K

Proprietary: NO
Ingredient: SILICA, CRYSTALLINE - CRISTOBALITE
Ingredient Sequence Number: 03

Percent: <0.5
Ingredient Action Code:
Ingredient Focal Point: N
NIOSH (RTECS) Number: VV7325000
CAS Number: 14464-46-1
OSHA PEL: SEE TABLE Z-3
ACGIH TLV: 0.05 MG/M3 RDUST
Other Recommended Limit: N/K

Proprietary: NO
Ingredient: SILICA, CRYSTALLINE - QUARTZ
Ingredient Sequence Number: 04
Percent: <0.1
Ingredient Action Code:
Ingredient Focal Point: N
NIOSH (RTECS) Number: VV7330000
CAS Number: 14808-60-7
OSHA PEL: SEE TABLE Z-3
ACGIH TLV: 0.1 MG/M3 RDUSTN/K

Report for NIIN: 00N057275

Other Recommended Limit: N/K
==========

Physical/Chemical Characteristics
==========
Appearance And Odor: WHITE TO OFF WHITE GRANULES, NO ODOR.
Boiling Point: N/A
Melting Point: 2000F,1093C
Vapor Pressure (MM Hg/70 F): N/A
Vapor Density (Air=1): N/A
Specific Gravity: 0.1-0.4(H*2O=1)
Decomposition Temperature: N/K
Evaporation Rate And Ref: NOT APPLICABLE
Solubility In Water: SLIGHT
Percent Volatiles By Volume: N/K
Viscosity:
pH: N/K
Radioactivity:
Form (Radioactive Matl):
Magnetism (Milligauss):
Corrosion Rate (IPY): N/K
Autoignition Temperature:
==========

Fire and Explosion Hazard Data

==========
Flash Point: NON-FLAMMABLE
Flash Point Method: N/P
Lower Explosive Limit: N/K
Upper Explosive Limit: N/K
Extinguishing Media: MEDIA SUITABLE FOR SURROUNDING FIRE (FP N).
Special Fire Fighting Proc: WEAR NIOSH/MSHA APPROVED SCBA & FULL PROTECTIVE EQUIPMENT (FP N).
Unusual Fire And Expl Hazrds: NOT APPLICABLE.
==========

Reactivity Data

==========
Stability: YES
Cond To Avoid (Stability): NONE SPECIFIED BY MANUFACTURER.
Materials To Avoid: NONE.
Hazardous Decomp Products: NONE.
Hazardous Poly Occur: NO
Conditions To Avoid (Poly): NOT RELEVANT
==========

Health Hazard Data

==========
LD50-LC50 Mixture: NONE SPECIFIED BY MANUFACTURER.
Route Of Entry - Inhalation: YES
Route Of Entry - Skin: NO
Route Of Entry - Ingestion: NO
Health Haz Acute And Chronic: ACUTE:NONE. CHRONIC:EXCESSIVE INHALATION
OVER LONG PERIOD MAY CAUSE HARMFUL IRRITATION; USE MASK SUITABLE FOR
NUISANCE DUST.
Carcinogenicity - NTP: YES
Carcinogenicity - IARC: YES

Report for NIIN: 00N057275

Carcinogenicity - OSHA: NO
Explanation Carcinogenicity: SILICA, CRYSTALLINE-CRISTOBALITE/QUARTZ:IARC
MONOGRAPHS, SUPP, VOL 7, PG 341, 1987:GROUP 2A. NTP 7TH ANNUAL (SUP DAT)
Signs/Symptoms Of Overexp: COUGHING.
Med Cond Aggravated By Exp: RESPIRATORY.
Emergency/First Aid Proc: INGEST:CALL MD IMMEDIATELY (FP N). INHAL

: REMOVE
TO FRESH AIR. SUPPORT BREATHING (GIVE O*2/ARTF RESP) (FP N). SKIN:
FLUSH
W/COPIOUS AMOUNTS OF WATER. CALL MD (FP N). EYES:ATTEMPT TO WASH O
UT WITH
CLEAR WATER FOR AT LEAST 15 MINUTES IF UNABLE TO HAVE PARTICLE REM
OVED BY
PROFESSIONAL.
==========

Precautions for Safe Handling and Use

==========
Steps If Matl Released/Spill: VACUUM CLEAN OR SWEEP MATERIAL; USE
NIOSH/
MSHA APPROVED RESPIRATORS SUITABLE FOR NUISANCE DUST AND EYE PROTE
CTION.
Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.
Waste Disposal Method: DISPOSE IN BULK CONTAINERS ACCORDING TO LOC
AL,
STATE AND FEDERAL DUMP REQUIREMENTS. NO SPECIAL TREATMENT REQUIRED
.
Precautions-Handling/Storing: USE GOOD HOUSEKEEPING TO AVOID DUST.
Other Precautions: USE GOOD HOUSEKEEPING TO AVOID TRANSIENT DUST.
==========

Control Measures

==========
Respiratory Protection: NIOSH/MSHA APPROVED MASK SUITABLE FOR NUIS
ANCE
DUST.
Ventilation: MAINTAIN DUST LEVEL BELOW TLV.
Protective Gloves: IMPERVIOUS GLOVES (FP N).
Eye Protection: ANSI APPRVD CHEM WORKERS GOGGS (FP N).
Other Protective Equipment: NONE REQUIRED.
Work Hygienic Practices: NONE SPECIFIED BY MANUFACTURER.
Suppl. Safety & Health Data: EXPLAN OF CARCIN:CARCINOGENS, 1994:
ANTICIPATED TO BE CARCINOGEN.
==========

Transportation Data

==========
Transportation Action Code:
Transportation Focal Point:
Trans Data Review Date:
DOT PSN Code:

DOT Symbol:
DOT Proper Shipping Name:
DOT Class:
DOT ID Number:
DOT Pack Group:
DOT Label:
DOT/DoD Exemption Number:
IMO PSN Code:
IMO Proper Shipping Name:
IMO Regulations Page Number:
IMO UN Number:
IMO UN Class:
IMO Subsidiary Risk Label:
IATA PSN Code:

Report for NIIN: 00N057275

IATA UN ID Number:
IATA Proper Shipping Name:
IATA UN Class:
IATA Subsidiary Risk Class:
IATA Label:
AFI PSN Code:
AFI Symbols:
AFI Prop. Shipping Name:
AFI Class:
AFI ID Number:
AFI Pack Group:
AFI Label:
AFI Special Prov:
AFI Basic Pac Ref:
MMAC Code:
N.O.S. Shipping Name:
Additional Trans Data:
==========

Disposal Data

==========
Disposal Data Action Code:
Disposal Data Focal Point:
Disposal Data Review Date:
Rec # For This Disp Entry:
Tot Disp Entries Per NSN:
Landfill Ban Item:
Disposal Supplemental Data:
1st EPA Haz Wst Code New:
1st EPA Haz Wst Name New:

1st EPA Haz Wst Char New:
1st EPA Acute Hazard New:
2nd EPA Haz Wst Code New:
2nd EPA Haz Wst Name New:
2nd EPA Haz Wst Char New:
2nd EPA Acute Hazard New:
3rd EPA Haz Wst Code New:
3rd EPA Haz Wst Name New:
3rd EPA Haz Wst Char New:
3rd EPA Acute Hazard New:
==========

Label Data
==========
Label Required: YES
Technical Review Date: 02FEB95
Label Date:
MFR Label Number:
Label Status: G
Common Name: SKID TEX
Chronic Hazard: YES
Signal Word: CAUTION!
Acute Health Hazard-None:
Acute Health Hazard-Slight: X
Acute Health Hazard-Moderate:

Report for NIIN: 00N057275

Acute Health Hazard-Severe:
Contact Hazard-None: X
Contact Hazard-Slight:
Contact Hazard-Moderate:
Contact Hazard-Severe:
Fire Hazard-None: X
Fire Hazard-Slight:
Fire Hazard-Moderate:
Fire Hazard-Severe:
Reactivity Hazard-None: X
Reactivity Hazard-Slight:
Reactivity Hazard-Moderate:
Reactivity Hazard-Severe:
Special Hazard Precautions: AVOID PROLONGED INHALATION OF DUST. AC
UTE:
NONE. CHRONIC:CANCER HAZARD. CONTAINS CRYSTALLINE SILICA CRISTOBAL
ITE AND
QUARTZ WHICH ARE LISTED AS LUNG CARCINOGENS OF LAB ANIMALS (FP N).
EXCESSIVE INHALATION OVER LONG PERIOD MAY CAUSE HARMFUL IRRITATION

; USE
MASK SUITABLE FOR NUISANCE DUST. INHALATION OF SILICA OVERA PERIOD
 OF YEARS
MAY CAUSE THE LUNG DISEASE SILICOSIS (FP N).
Protect Eye: Y
Protect Skin: Y
Protect Respiratory: Y
Label Name: GAMMA LABS, INC
Label Street: 840 ARROYO AVE
Label P.O. Box:
Label City: SAN FERNANDO
Label State: CA
Label Zip Code: 91340
Label Country: US
Label Emergency Number: 818-365-7500
Year Procured:

SAFETY DATA SHEET

Issue Date 23-Jun-2011 **Revision Date** 3-Mar-2015 **Version** 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name Smart Strip

Other Means of Identification

SDS # DCI-039

Recommended Use of the Chemical and Restrictions on Use

Recommended Use Paint remover.

Details of the Supplier of the Safety Data Sheet

Supplier Address

Dumond Chemicals, Inc.
83 General Warren Blvd
Suite 190
Malvern, PA 19355

Emergency Telephone Number

Company Phone Number 1-609-655-7700

Emergency Telephone INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Classification

Appearance White viscous liquid **Physical State** Liquid **Odor** Faint aromatic odor

Hazards Not Otherwise Classified (HNOC)

May be harmful if swallowed
May be harmful in contact with skin

Other Hazards

Toxic to aquatic life with long lasting effects
Toxic to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Water	7732-18-5	40-60

Benzyl alcohol	100-51-6	30-50
Titanium dioxide	13463-67-7	1-5

4. FIRST AID MEASURES

First Aid Measures

Inhalation Remove to fresh air. Oxygen or artificial respiration if needed. Get medical attention if necessary.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if necessary.

Ingestion If conscious give 2 glasses of water to dilute. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if necessary.

Skin Contact Wash thoroughly with soap and water until no traces of the chemical remain. Remove contaminated clothing and shoes. Get medical attention if irritation occurs.

Most Important Symptoms and Effects, both Acute and Delayed

Symptoms May cause skin and eye irritation. May be harmful if absorbed through the skin. Mists and vapors cause irritation of the eyes, mucous membranes, and upper respiratory tract.

Indication of any Immediate Medical Attention and Special Treatment Needed

Note to Physicians Treat symptomatically. Individuals with chronic respiratory or skin diseases may be at risk from exposure.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Water spray (fog). Foam. Dry chemical or CO2.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical
Decomposition may be hazardous. Vapors may form explosive mixtures with air in confined areas. Sealed containers may rupture when heated. Cool containers exposed to flames with water until well after the fire is out.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions Use personal protective equipment as required.

Environmental Precautions Do not allow into any sewer, on the ground or into any body of water. See Section 12 for additional ecological information.

Methods and Material for Containment and Cleaning Up

Methods for Containment Prevent further leakage or spillage if safe to do so. Remove all sources of ignition. Dike spill and prevent spill from entering sewers and waterways. Collect using an inert absorbent material and place in appropriate containers for disposal.

Methods for Cleaning Up Keep in suitable, closed containers for disposal. Wash spill area with plenty of water. Spills and releases may have to be reported to Federal and/or local authorities. See section 15.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Advice on Safe Handling Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Protect container from physical damage. Avoid breathing vapors or mists. Remove contaminated clothing and shoes. Wash thoroughly after handling before eating, drinking, smoking, or using toilet facilities. Since empty container retains residue, follow all label warnings even after container is empty.

Conditions for Safe Storage, Including any Incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from oxidizers and incompatible materials.

Incompatible Materials Strong acids. Bases. Reducing agent. Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Titanium dioxide 13463-67-7	TWA: 10 mg/m^3	TWA: 15 mg/m^3 total dust (vacated) TWA: 10 mg/m^3 total dust	IDLH: 5000 mg/m^3

Appropriate Engineering Controls

Engineering Controls For operations where contact can occur, a safety shower and an eye wash facility should be available. Provide natural or mechanical ventilation to control exposure levels below airborne exposure limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/Face Protection Chemical safety goggles/faceshield. Do not wear contact lenses.

Skin and Body Protection Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Butyl rubber or other impervious gloves are required.

Respiratory Protection If occupational exposure limits are exceeded, use NIOSH approved respirator with organic vapor cartridges and dust/mist pre-filter. For higher concentrations (greater than10 times the recommended exposure limit) an approved supplied air respirator (with escape bottle if required) or self–contained breathing apparatus may be required. Selection of respiratory protection depends on the contaminant type, form, and concentration. Select in accordance with OSHA 1910.134 and good industrial hygiene practice.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	Liquid		
Appearance	White viscous liquid	**Odor**	Faint aromatic odor
Color	White	**Odor threshold**	Not determined

Property	**Values**	**Remarks • Method**
pH	6	
Melting point/freezing point	-15 °C / 5 °F	
Boiling point/boiling range	96 °C / 205 °F	
Flash point	None	
Evaporation rate	< 1	
Flammability (solid, gas)	Not determined	
Flammability limits in air		
Upper flammability limits	Not available	
Lower flammability limit	Not available	
Vapor pressure	0.1 mmHg	@ 30 °C
Vapor density	3-4	(Air=1)
Specific gravity	10.54 lbs/gal	
Water solubility	Partially soluble	
Solubility in other solvents	Not determined	
Partition coefficient	Not available	
Autoignition temperature	Not available	
Decomposition temperature	Not determined	
Kinematic viscosity	Not determined	
Dynamic viscosity	Not determined	
Explosive properties	Not determined	
Oxidizing Properties	Not determined	

Other Information

VOC Content (%)	0%
VOC Content	0 lbs/gal

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Conditions to Avoid
Keep out of reach of children.

Incompatible Materials
Strong acids. Bases. Reducing agent. Strong oxidizing agents.

Hazardous Decomposition Products
Carbon monoxide. Carbon dioxide (CO2). Nitrogen oxides (NOx). May oxidize with air to form benzaldehyde and benzoic acid.

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Product Information

Inhalation Avoid breathing vapors or mists.

Eye Contact Avoid contact with eyes.

Skin Contact May be harmful in contact with skin.

Ingestion May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	> 90 mL/kg (Rat)	-	-
Benzyl alcohol 100-51-6	= 1230 mg/kg (Rat)	= 2000 mg/kg (Rabbit)	= 8.8 mg/L (Rat) 4 h
Titanium dioxide 13463-67-7	> 10000 mg/kg (Rat)	-	-

Information on Physical, Chemical and Toxicological Effects

Symptoms May cause skin and eye irritation. May be harmful if absorbed through the skin. Mists and vapors cause irritation of the eyes, mucous membranes, and upper respiratory tract.

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-term Exposure

Carcinogenicity Titanium dioxide is a possible carcinogen when it appears as a respirable dust.

Chemical Name	ACGIH	IARC	NTP	OSHA
Titanium dioxide 13463-67-7		Group 2B		X

Chronic toxicity Individuals with chronic respiratory or skin diseases may be at risk from exposure.

Numerical Measures of Toxicity- Product

Not determined

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 3047 mg/kg
ATEmix (dermal) 5000 mg/kg
ATEmix (inhalation-gas) 1750 mg/l
ATEmix (inhalation-dust/mist) 0.1 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Benzyl alcohol 100-51-6	35: 3 h Anabaena variabilis mg/L EC50	460: 96 h Pimephales promelas mg/L LC50 static 10: 96 h Lepomis macrochirus mg/L LC50 static	EC50 = 50 mg/L 5 min EC50 = 63.7 mg/L 15 min EC50 = 63.7 mg/L 5 min EC50 = 71.4 mg/L 30 min	23: 48 h water flea mg/L EC50

Persistence and Degradability

Material is readily biodegradable.

Bioaccumulation
The product has low potential for bioaccumulation.

Mobility
Not determined.

Chemical Name	Partition coefficient
Benzyl alcohol 100-51-6	1.1

Other Adverse Effects Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances

DOT Not regulated

IATA Not regulated

IMDG Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Listed
DSL	Listed

Legend:
TSCA *- United States Toxic Substances Control Act Section 8(b) Inventory*
DSL/NDSL *- Canadian Domestic Substances List/Non-Domestic Substances List*
EINECS/ELINCS *- European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*
ENCS *- Japan Existing and New Chemical Substances* ***IECSC***
- China Inventory of Existing Chemical Substances ***KECL*** *-*
Korean Existing and Evaluated Chemical Substances
PICCS *- Philippines Inventory of Chemicals and Chemical Substances*

US Federal Regulations

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

US State Regulations

Chemical Name	California Proposition 65
Titanium dioxide - 13463-67-7	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Benzyl alcohol 100-51-6		X	X
Titanium dioxide 13463-67-7	X	X	X

U.S. EPA Label Information

16. OTHER INFORMATION

NFPA	**Health Hazards**	**Flammability**	**Instability**	**Special Hazards**
	2	1	0	Not determined
HMIS	**Health Hazards**	**Flammability**	**Physical Hazards**	**Personal Protection**
	Not determined	Not determined	Not determined	Not determined

Issue Date	23-Jun-2011
Revision Date	12-Dec-2012
Revision Note	New format

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Material Safety Data Sheet

PC Series **MSDS No. 203**

Date of Preparation: March 3, 2005 Revision: 0004

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: PC Series Epoxy
Other Designations: Formulated Epoxy
General Use: Adhesive
Manufacturer: Smooth-On Inc., 2000 St. John St., Easton PA 18042
Phone (610) 252-5800, FAX (610) 252-6200
Emergency Contact: Chem-Tel
Domestic 800-255-3924
International 813-248-0585

Section 2 - Composition / Information on Ingredients

Component	CAS Number	ACGIH TWA	Exposure Limits OSHA PEL	Weight Percent (%)
Diglycidyl Ether of Bisphenol A	25085-99-8	None Established	None Established	**50-60**
Sodium Aluminosilicate	1344-00-9	10 mg/m3	None Established	**20-30**
Triphenyl Phosphite	101-02-0	None Established	None Established	**5-10**
Silica, Amorphous	67762-90-7	6mg/m^3 as dust	10mg/m^3 as dust	**2-5**
Iron Oxide	1317-61-9	None Established	None Established	**2-7**
Titanium Dioxide	13463-67-7	10mg/m^3 as dust	15mg/m^3 as dust	**5-10**

Section 3 - Hazards Identification

¶ ¶ ¶ ¶ ¶ Emergency Overview ¶ ¶ ¶ ¶ ¶

Potential Health Effects

HMIS	
H	1
F	1
R	0

Primary Entry Routes: Skin
Acute Effects
Inhalation: unlikely unless heated
Eye: can cause irritation
Skin: can cause irritation
Ingestion: Unknown
Carcinogenicity: IARC, NTP, and OSHA do not list any components of this product as a carcinogen.
Medical Conditions Aggravated by Long-Term Exposure: preexisting eye and skin disorders may be aggravated by exposure

Section 4 - First Aid Measures

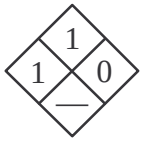
Inhalation: Remove to fresh air: if breathing is labored seek medical attention.
Eye Contact: Flush with water for 15 minutes; seek medical attention

Section 4 - First Aid Measures (continued

Skin Contact: remove with soap and water: if redness or rash develops seek medical attention: Launder contaminated clothing before reuse.
Ingestion: seek medical attention
After first aid, get appropriate in-plant, paramedic, or community medical support.

Section 5 - Fire-Fighting Measures

NFPA



Flash Point: >392 °F (200 °C)
Flash Point Method: PMCC
Flammability Classification: Non-Flammable
Extinguishing Media: Foam, Dry Chemical, and Carbon Dioxide
Unusual Fire or Explosion Hazards: None
Hazardous Combustion Products: Oxides of Nitrogen and Carbon, Acids and Aldehydes when burned
Fire-Fighting Instructions: Do not release runoff from fire control methods to sewers or waterways.
Fire-Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.

Section 6 - Accidental Release Measures

Spill /Leak Procedures
Containment: Dike and contain for later disposal. Do not release into sewers or waterways.
Cleanup: Scrape up excess.
Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: Avoid prolonged or repeated skin contact. Use good general housekeeping procedures.
Storage Requirements: Store in Closed containers. Use only with adequate ventilation.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls:
Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.
Administrative Controls:
Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear an MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or nonroutine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA. *Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.*

Section 8 - Exposure Controls / Personal Protection (continued)

If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

Protective Clothing/Equipment: Wear chemically protective gloves, boots, and aprons to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Physical and Chemical Properties

Physical State:
Odor: mild odor
Vapor Pressure: None (Polymeric Resin)
Vapor Density (Air=1): None
Specific Gravity (H_2O=1, at 4 °C): 1.40

Water Solubility: negligible
Boiling Point: None
Freezing/Melting Point: Not Eastablished
Evaporation Rate: None
Viscosity: Paste

Section 10 - Stability and Reactivity

Stability: These products are stable at room temperature in closed containers under normal storage and handling conditions.

Polymerization: Hazardous polymerization cannot occur.

Chemical Incompatibilities: Strong oxidizing agents, strong Lewis or mineral acids.

Conditions to Avoid: Mixing with Amines under uncontrolled conditions.

Hazardous Decomposition Products: Thermal oxidative decomposition can produce: Oxides of Nitrogen and Carbon, Acids and Aldehydes when burned.

Section 11- Toxicological Information

Toxicity Data:*

Eye Effects: Irritation
Skin Effects: Irritation

Carcinogenicity: None
Mutagenicity: None Determined
Teratogenicity: None Determined

Section 12 - Ecological Information

None Determined

Section 13 - Disposal Considerations

Disposal: Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.

Section 14 - Transport Information

DOT	IATA	IMDG
Not Regulated	**Not Regulated**	**Not Regulated**

Section 15 - Regulatory Information

EPA Regulations: This material in not considered a hazardous material.
RCRA Hazardous Waste Number: Not listed (40 CFR 261.33): None
RCRA Hazardous Waste Classification (40 CFR 261): Not classified
CERCLA Hazardous Substance (40 CFR 302.4) unlisted specific per RCRA, Sec. 3001; CWA, Sec. 311 (b)(4); CWA, Sec. 307(a), CAA, Sec. 112: None
CERCLA Reportable Quantity (RQ), None
SARA 311/312 Codes: None
This product does not contain the chemicals that are subject to release reporting requirements under section 313 of SARA Title III.
SARA Toxic Chemical (40 CFR 372.65): None
SARA EHS (**Extremely Hazardous Substance) (40 CFR 355):** Not listed,
TSCA Inventory Status (40CFR710): All components of this formula are on the TSCA inventory

State Regulations:

California Proposition 65: These products contain a trace amount of Epichlorohydrin, which has been identified by the state California to cause cancer.

Massachusetts, Minnesota, Pennsylvania and Washington Right To Know, Substance List:

Chemical Name	CAS #	% by Weight
Titanium Dioxide	13463-67-7	10.0 Max

Section 16 - Other Information

Prepared By: Dominick J. Finocchio
Title: Technical Director

Disclaimer: The information contained in this MSDS is considered accurate as of the version date. However, no warranty is expressed or implied regarding the accuracy of the data. Since the use of this product is not within the control of Smooth-On Inc., it is the user's obligation to determine the suitability of the product for its intended application and assumes all risk and liability for its safe use.

Material Safety Data Sheet

PC Series **MSDS No. 203**

Date of Preparation: March 3, 2005 Revision: 0004

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: PC-B
Other Designations: Formulated Epoxy
General Use: Adhesive
Manufacturer: Smooth-On Inc., 2000 St. John St., Easton PA 18042
Phone (610) 252-5800, FAX (610) 252-6200
Emergency Contact: Chem-Tel
Domestic 800-255-3924
International 813-248-0585

Section 2 - Composition / Information on Ingredients

Component	CAS Number	ACGIH TWA	Exposure Limits OSHA PEL	Weight Percent (%)
Sodium Aluminosilicate	1344-00-9	10 mg/m3	None Established	**20-30**
Polyamide Resin	68953-36-6	None Established	None Established	**5-10**
Wollastonite	13983-17-0	10 mg/m3	None Established	**15-20**
Amidoamine	68298-14-6	None Established	None Established	**40-50**
Tetraethylene Pentamine	112-57-2	None Established	None Established	**1-3**
2,4.6 Tri (dimethyl) phenol	90-72-2	None Established	None Established	**1-3**

Section 3 - Hazards Identification

¶ ¶ ¶ ¶ ¶ Emergency Overview ¶ ¶ ¶ ¶ ¶

Potential Health Effects

HMIS	
H	2
F	1
R	0

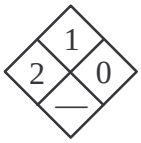
Primary Entry Routes: Skin, inhalation of vapors
Acute Effects
Inhalation: vapors are irritating to respiratory tract.
Eye: can cause burns
Skin: will cause burns: may cause sensitization after prolonged or repeated use.
Ingestion: will cause severe damage to the mucous membranes if swallowed.
Carcinogenicity IARC, NTP, and OSHA: IARC, NTP, and OSHA do not list any components of this product as a carcinogen.
Medical Conditions Aggravated by Long-Term Exposure: preexisting eye and skin disorders may be aggravated by exposure.

Section 4 - First Aid Measures

Inhalation: Remove too fresh air; if breathing is labored seek medical attention.
Eye Contact: Flush with water for 15 minutes; seek medical attention
Skin Contact: remove with soap and water: if redness or rash develops seek medical attention: Launder contaminated clothing before reuse.
Ingestion: do not induce vomiting; seek medical attention
After first aid, get appropriate in-plant, paramedic, or community medical support.

Section 5 - Fire-Fighting Measures

NFPA



Flash Point: >268 °F (131°C)
Flash Point Method: PMCC
Flammability Classification: Non-Flammable
Extinguishing Media: Foam, Dry Chemical, and Carbon Dioxide
Unusual Fire or Explosion Hazards: None
Hazardous Combustion Products: Oxides of Nitrogen and Carbon when burned
Fire-Fighting Instructions: Do not release runoff from fire control methods to sewers or waterways.
Fire-Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.

Section 6 - Accidental Release Measures

Spill /Leak Procedures
Containment: Dike and contain for later disposal. Do not release into sewers or waterways.
Cleanup: Scrape up excess.
Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: Avoid prolonged or repeated eye and skin contact. Avoid breathing vapors and use only with adequate ventilation. Use good general housekeeping procedures.
Storage Requirements: Store in Closed containers. Use only with adequate ventilation.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls:
Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.
Administrative Controls:
Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear an MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or nonroutine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA. *Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.* If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.
Protective Clothing/Equipment: Wear chemically protective gloves, boots, and aprons to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

Section 8 - Exposure Controls / Personal Protection (continued)

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.
Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.
Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Physical and Chemical Properties

Physical State:
Appearance and Odor: Tan Paste; ammonia odor
Vapor Pressure: <1 @ 25°C
Vapor Density (Air=1): No Data
Specific Gravity (H_2O=1, at 4 °C): 1.5
Viscosity (poise): Paste

Water Solubility: negligible
Boiling Point: None
Freezing/Melting Point: None Determined
Evaporation Rate: None Determined

Section 10 - Stability and Reactivity

Stability: PC-B is stable at room temperature in closed containers under normal storage and handling conditions.
Polymerization: Hazardous polymerization cannot occur.
Chemical Incompatibilities: Strong oxidizing agents, strong Lewis or mineral acids.
Conditions to Avoid: Mixing with epoxies under uncontrolled conditions.
Hazardous Decomposition Products: Thermal oxidative decomposition of PC-B can produce: Oxides of Nitrogen and Carbon when burned.

Section 11 – Toxicological Information

Toxicity Data:*

Eye Effects: can cause burns
Skin Effects: will cause burns

Carcinogenicity: None Determined
Mutagenicity: None Determined
Teratogenicity: None Determined

Section 12 - Ecological Information

None Determined

Section 13 - Disposal Considerations

Disposal: Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.

Section 14 - Transport Information

DOT	IATA	IMDG
Not Regulated	**Not Regulated**	**Not Regulated**

Section 15 - Regulatory Information

EPA Regulations: This material in not considered a hazardous material.
RCRA Hazardous Waste Number: Not listed (40 CFR 261.33): None
RCRA Hazardous Waste Classification (40 CFR 261): Not classified
CERCLA Hazardous Substance (40 CFR 302.4) unlisted specific per RCRA, Sec. 3001; CWA, Sec. 311 (b)(4); CWA, Sec. 307(a), CAA, Sec. 112
CERCLA Reportable Quantity (RQ), None
SARA 311/312 Codes: None
SARA Toxic Chemical (40 CFR 372.65): None
SARA EHS (**Extremely Hazardous Substance) (40 CFR 355):** Not listed,
TSCA Inventory Status (40CFR710): All components of this formula are on the TSCA inventory

States Right To Know, Substance List**:**

Florida, Massachusetts and Pennsylvania

Chemical Name	CAS #	% by Weight
Tetraethylene Pentamine	112-57-2	3.0 Max

California Proposition 65: This product does not intentionally contain any chemicals, which have been identified by the state of California to cause cancer, birth defects or other reproductive harm.

Section 16 - Other Information

Prepared By: Dominick J. Finocchio
Title: Technical Director

Disclaimer: The information contained in this MSDS is considered accurate as of the version date. However, no warranty is expressed or implied regarding the accuracy of the data. Since the use of this product is not within the control of Smooth-On Inc., it is the user's obligation to determine the suitability of the product for its intended application and assumes all risk and liability for its safe use.

S.A.M.

LOW TEMPERATURE

HYDRAULIC FLUID

MATERIAL SAFETY DATA SHEET

Material Safety Data Sheet SLiPS Lubricants

Trade Name: POLAR ICE HYDRAULIC OIL

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer	SLiPS Lubricants	MSDS Number	N/A
Address	146 Erie Industrial Park Port Clinton, OH 43452	CAS Number	MIXTURE
Phone Number	419-635-2100	Date Prepared	10/01/2005
Emergency #	419-543-1356	Prepared By	STANLEY SENSMEIER
Product Chemical Name	PETROLEUM OIL	Intended Use	Hydraulic Oil

DATA CONTAINED HEREIN IS PURSUANT TO THE ANSI Z400.1 STANDARD

SECTION II - COMPOSITION AND INFORMATION ON INGREDIENTS

COMPONENENTS CHEMICAL NAME	%V	OSHA PEL	ACGIH TLV	LIMITS
Naphthenic Petroleum Oil	80-950%	N/A	N/A	N/A
Acrylic Polymer	3-10%	N/A	N/A	N/A
Proprietary Additives	1-3%	N/A	N/A	N/A

SECTION 111 - PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point	500*	Specific Gravity (H_2O=1)	0.88
Vapor Pressure	0.0 mm Hg at 70*F	Melting Point	N/A
Vapor Density (air =1)	>10	Evaporation Rate (Butyl Acetate=1)	0.001
Solubility in Water	INSOLUBLE	Water Reactive	N/A
PH	N/A	Appearance & Odor	AMBER or BLUE, PETROLEUM ODOR
VOC Content	N/A	Density	7.3 lb.

SECTION IV - HAZARDOUS IDENTIFICATION, FIRST AID MEASURES & EXPOSURE CONTROL

	EFFECT OF EXPOSURE	FIRST AID MEASURES	SPECIAL PROTECTION
EYE CONTACT	Direct Contact with material or exposure to vapors may cause irritation.	For direct contact, flush eyes with water, holding eyelids apart for 15 minutes. Get medical attention if irritation or pain persists.	Wear eye protection.
INHALATION	High concentrations of vapor or mist may irritate the respiratory tract.	Remove to fresh air, if not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention if breathing difficulties persists.	Use NOISH/MSHA approved respiratory protective equipment when concentration of vapor or mist exceeds applicable limits.
INGESTION	May cause throat irritation, nausea, vomiting and diarrhea. Breathing material into the lungs during ingestion or vomiting may cause lung injury.	Immediately get medical attention. DO NOT induce vomiting. If spontaneous vomiting occurs, keep head below hips to avoid breathing material into lungs.	
SKIN ABSORPTION	Direct contact with material or exposure to vapors is not expected to cause irritation. A single, prolonged exposure is not likely to result in the material being absorbed through the skin in harmful amounts.	Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if irrigation or pain persists.	Use good personal hygiene. Wash thoroughly with soap and water after handling and before eating, drinking, or smoking.

SECTION V - STABILITY AND REACTION

Stability: **X Stable** **_ Unstable**

Incompatibility (material to avoid): **Avoid oxidizing agents.**

Hazardous Decomposition Products: **None under normal temperatures and pressures.**

Hazardous Polymerization: **X Will not occur_ May occur**

SECTION IV - ACCIDENTAL RELEASE AND DISPOSAL MEASURES

Steps to be taken in case material is released or spilled:
Contain spill ad recover free liquid by absorbing with a suitable material. Rinse spill site with clean water.

Waste disposal method:
Disposal of absorbent material in accordance with federal, state, and local regulations.

SECTION VII - HANDLING AND STORAGE

Precautions to be taken in handling and storing:
Store away from strong oxidizers, strong acids and alkalis. Keep container closed when not dispensing. Keep from freeing. Always wear protective equipment.

Other Precautions:
Good personal hygiene is important. Keep area clean and wash hands before eating.

SECTION VIII- FIRE FIGHTING MEASURES

Flash Point	**330*F**			
	Flammability Limits in	LEL:	UEL:	
Method Used	**COC**	Air % by Vol.	**1%**	**10%**

Extinguisher Media	**Carbon Dioxide, dry chemical, regular foam or water spray**

HMIS Rating	**Health 0**	**Fire 1**	**Reactivity 0**	**Specific Hazard 0**

Special fire Fighting Procedures	**Keep storage containers cool with water spray. Positive-pressure self contained breathing apparatus (SCBA) and structural firefighters protective clothing may provide limited protection.**

SECTION IX - TOXICOLOGICAL INFORMATION

Clinical test data: **N/A**

Carcinogens: **N/A**

SECTION X - ECOLOGICAL INFORMATION

Ecological Impact data: **N/A**

Ecotoxicology data: **N/A**

SECTION XI - TRANSPORTATION

DOT Labeling Information **N/A**	Hazard Class: **N/A**	WHMIS Classification:
Proper Shipping Name: **N/A**	Hazard Identification Number: **N/A**	Packing Group:

SECTION XII - REGULATION

Categories or Components under SARA Title III:
Components Listed in the TSCA Inventory:
RCRA Hazardous Waste Codes:
CERCLA Reportable Quantity:

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 700.00

Revision Date: March 27, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Acetate Trihydrate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

Hazard class: Skin corrosion or irritation (Category 3). Causes mild skin irritation (H316).

Hazard class: Serious eye damage or irritation (Category 2B). Causes eye irritation (H320).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium acetate trihydrate	6131-90-4	$NaC_2H_3O_2 \cdot 3H_2O$	136.08	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Wash with plenty of water. **If skin irritation occurs**: Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Combustible solid.
Autoignition Temperature: 607 °C Flash point: 250 °C
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Do not allow solid to become airborne. Ventilate area. Wipe up with damp towel, and place in sealed bag or container and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Efflorescent in warm air. Store in a cool, dry place within a Flinn Chem-Saf™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless crystals. Faint vinegar odor.
Soluble: Water. Slightly in alcohol

Boiling point: 122 ^{o}C
Melting point: 58 ^{o}C
pH: 9.25
Specific gravity: 1.45

SECTION 10 — STABILITY AND REACTIVITY

Avoid strong oxidizers and ignition sources.
Shelf life: Fair to poor, efflorescent in warm air. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant
Chronic effects: N.A.
Target organs: G.I. system

ORL-RAT LD_{50}: 3530 mg/kg
IHL-RAT LC_{50}: >30 g/m^3
SKN-RBT LD_{50}: >10 mg/kg

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Freshwater Fish Species Data: 24 Hr LC_{50} *Lepomis macrochirus*: 5000 mg/L

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (204-823-8).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 27, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 700.10

Revision Date: March 27, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Acetate Solution

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin corrosion or irritation (Category 3). Causes mild skin irritation (H316).

Hazard class: Serious eye damage or irritation (Category 2B). Causes eye irritation (H320).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium acetate trihydrate	6131-90-4	$NaC_2H_3O_2 \cdot 3H_2O$	136.08	1-9%
Water	7732-18-5	H_2O	18.00	91-99%

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Clear, colorless liquid. Slight vinegar odor.

SECTION 10 — STABILITY AND REACTIVITY

Avoid strong oxidizers.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 3350 mg/kg as sodium acetate
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (204-823-8).

SECTION 16 — OTHER INFORMATION

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Revision Date: March 27, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 700.05

Revision Date: January 16, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Acetate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

Hazard class: Skin corrosion or irritation (Category 3). Causes mild skin irritation (H316).

Hazard class: Serious eye damage or irritation (Category 2B). Causes eye irritation (H320).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium acetate, anhydrous	127-09-3	CO_2CH_3Na	82.03	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Wash with plenty of water. **If skin irritation occurs**: Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Combustible solid.
Autoignition Temperature: 607 ^{o}C Flash point: 250 ^{o}C
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Do not allow solid to become airborne. Ventilate area. Wipe up, place in sealed bag or container and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Hygroscopic. Store in Flinn Chem-Saf™ bag

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless crystals. Faint vinegar odor.
Soluble: Water. Moderately in alcohol

Boiling point: 881.4 ^{o}C
Melting point: 328 ^{o}C
pH: 9.25
Specific gravity: 1.528 (anhydrous)

SECTION 10 — STABILITY AND REACTIVITY

Avoid strong oxidizers and ignition sources.
Shelf life: Fair to poor, hygroscopic. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant
Chronic effects: N.A.
Target organs: G.I. system

ORL-RAT LD_{50}: 3530 mg/kg
IHL-RAT LC_{50}: >30 g/m^3
SKN-RBT LD_{50}: >10 mg/kg

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Freshwater Fish Species Data: 24 Hr LC_{50} *Lepomis macrochirus*: 5000 mg/L

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (204-823-8).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

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Revision Date: January 16, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 706.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Benzoate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

Hazard class: Serious eye damage or irritation (Category 2A). Causes serious eye irritation (H319).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium benzoate	532-32-1	$C_6H_5CO_2Na$	144.11	
Synonym: Benzoic acid, sodium salt				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Combustible solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area and eliminate ignition sources. Do not allow solid to become airborne. Wipe up, place in sealed bag or container and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Store in a cool, dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White crystalline or granular powder. Odorless.
Soluble: Water and alcohol

Melting point: >300 ^{o}C
Specific gravity: 1.44

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers, heat, and ignition sources.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Skin, eye, mucous membrane irritation.
Chronic effects: Possible reproductive hazard.
Target organs: Possible teratogen

ORL-RAT LD_{50}: 4070 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

LC_{50} fathead minnow 96 Hr: 484 mg/L

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (208-534-8).

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 707.00

Revision Date: January 16, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Bicarbonate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

Product should be treated as a chemical and is not for consumption as it has been stored with other nonfood-grade chemicals.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium bicarbonate	144-55-8	$NaHCO_3$	84.01	
Synonyms: Sodium hydrogen carbonate; Baking soda				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Noncombustible solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates.
Stable under dry storage conditions. Slowly decomposes in moist air. Store in a Flinn Chem-Saf™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White powder or crystals (frequently in lumps). Odorless.
Soluble: Water. Insoluble in alcohol.

Melting point: loses carbon dioxide at 270 ^{o}C
Specific gravity: 2.2
Not for human consumption.

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers and strong acids.
Shelf life: Indefinite, if kept dry. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Gastrointestinal disturbances, irritating dust
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 4220 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (205-633-8).

SECTION 16 — OTHER INFORMATION

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Revision Date: January 16, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 710.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Bisulfate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

Hazard class: Serious eye damage or irritation (Category 1). Causes serious eye damage (H318).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium bisulfate	10034-88-5	$NaHSO_4 \cdot H_2O$	138.08	
Synonym: Sodium hydrogen sulfate monohydrate				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Immediately call a POISON CENTER or physician. Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P318+P351+P338).
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Hygroscopic. Keep container tightly closed. Store in a cool dry place within a Flinn Chem-Saf™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Moist, white crystals. Odorless.
Soluble: Water. Aqueous solution is strongly acidic.

Melting point: 58.5 ^{o}C
Specific gravity: 2.10

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong bases, strong oxidizers.
Shelf life: Poor, hygroscopic. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Corrosive
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-665-7).

SECTION 16 — OTHER INFORMATION

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Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 711.00

Revision Date: June 22, 2015

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Bisulfite

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 4). Harmful if swallowed (H302). Do not eat, drink or smoke when using this product (P270).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium bisulfite	7631-90-5	$NaHSO_3$	104.06	
Synonym: Sodium hydrogen sulfite				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell (P301+P330+P312).

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Air, heat, and moisture sensitive. Keep container tightly closed. Store in a cool, dry place within a Flinn Chem-Saf ™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).
Exposure guidelines: TLV 5 mg/m^3 (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White crystals or powder. Slight sulfurous odor.
Soluble: Water. Insoluble in alcohol.

Melting point: 150 ^oC (decomposes)
Refractive index: 1.526
Specific gravity: 1.48

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with acids and oxidizing agents. Oxidizes to sulfate when exposed to air. Decomposes upon exposure to heat.
Shelf life: Fair to poor, air, heat, and moisture sensitive. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Severe irritant, possible sensitizer, coughing, chest pains, difficulty breathing, stomach pains, vomiting, diarrhea.
Chronic effects: N.A.
Target organs: Eyes, skin and respiratory system

ORL-RAT LD_{50}: 2000 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-548-0).

SECTION 16 — OTHER INFORMATION

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Revision Date: June 22, 2015

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Sodium Borate Decahydrate

Material Safety Data Sheet
Science Stuff, Inc.
1104 Newport Ave
Austin, TX 78753 Phone (512) 837-6020
Chemtrec 800-424-9300
24 Hour Emergency Assistance
Section 1 Identification
Product Number: C2544 Health: 2
Flammability 0
Reactivity 0
Hazard Rating:
Least Slight Moderate High Extreme
0 1 2 3 4
NA = Not Applicable NE = Not Established

Product Name: Sodium Borate Decahydrate Reagent A.C.S., Granular
Trade/Chemical Synonyms
Formula: Na’B”O—½10H’O
RTECS: VZ2275000
C.A.S CAS# 1303-96-4
Section 2 Component Mixture
Sara 313 Component CAS Number % Dim Exposure Limits:

Sodium Borate Decahydrate CAS# 1303-96-4 100% W/W OSHA TWA 10 mg/mƒ

Section 3 Hazard Identification (Also see section 11)
Harmful if swallowed. May cause irritation. Avoid breathing vapors, or dusts. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.
Section 4 First Aid Measures
Harmful if swallowed. May cause irritation. Avoid breathing vapors, or dusts. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

FIRST AID: SKIN: Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention

EYES: Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid. INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen

INGESTION: If swallowed, induce vomiting immediately after giving two glasses of water. Never give anything by mouth to an unconcious person.
Section 5 Fire Fighting Measures
Fire Extinguisher Type: Any means suitable for extinguishing surrounding fire
Fire/Explosion Hazards: Negligible fire hazard when exposed to heat or flame
Fire Fighting Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.

Section 6 Accidental Release Measures
Wear Protective equipment.Ventilate area of leak or spill. Sweep up, place in a bag and hold for waste disposal. Vacuuming or wet sweeping may be required to avoid dust.

Section 7 Handling and Storage
Store in a cool, dry, well-ventilated place away from incompatible materials.Wash thoroughly after handling.
Section 8 Exposure Controls & Personal Protection
Respiratory Protection:NIOSH approved dust mask
Ventilation: Mechanical: Hand Protection: Gloves to prevent exposure
Local Exhaust: Eye Protection: Splash Goggles
Other Protective Equipment: Wear appropriate clothing to prevent skin exposure
Section 9 Physical and Chemical Properties
Melting Point: 75° C Specific Gravity 1.73
Boiling Point: information not available Percent Volatile by Volume: N/A
Vapor Pressure: N/A Evaporation Rate: N/A
Vapor Density: N/A Evaporation Standard:
Solubility in Water: Soluble Auto ignition Temperature: Not applicable
Appearance and Odor: grey, blue or green crystals, odorless Lower Flamm. Limit in Air: Not applicable
Flash Point: N/A Upper Flamm. Limit in Air: Not applicable

Section 10 Stability and Reactivity Information
Stability: Stable Conditions to Avoid: None known
Materials to Avoid:
Acids, alkaloids, metallic salts
Hazardous Decomposition Products:
Fumes of sodium oxide
Hazardous Polymerization:Will Not Occur
Condition to Avoid:None known

Section 11 Additional Information
Effects of overexposure: Acute and Chronic: Inhalationmay cause irritation to respiratory tract, coughing and nausea. Ingestion may cause nausea, vomiting, diarrhea, muscular spasms, circulatory depression, shock, kidney damage, coma and death. Skin contact may cause irritation. Prolonged skin absorption may cause skin rash, anorexia, weight loss, diarrhea, convulsions and anemia. Conditions aggravated/target organs: Persons with pre-existing eye, skin or respiratory conditions may be more susceptible.
DOT Classification: Not Regulated
DOT regulations may change from time to time. Please consult the most recent version of the relevant regulations.
Revision No:0 Date Entered: 9/1/2006 Approved by: WPF

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Material Safety Data Sheet (MSDS)

MSDS #: 712.10
Revision Date: November 25, 2002

Section 1 — Chemical Product and Company Identification

Sodium Borate Solution

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Section 2 — Composition, Information on Ingredients

Sodium Borate (1330-43-4) 4%,Water (7732-18-5) 96%

CAS#: None Established

Section 3 — Hazards Identification

Colorless, odorless solution.
Substance not considered hazardous. However, not all health aspects of this substance have been thoroughly investigated.

FLINN AT-A-GLANCE
Health-0
Flammability-0
Reactivity-0
Exposure-0
Storage-0

0 is low hazard, 3 is high hazard

Section 4 — First Aid Measures

Call a physician, seek medical attention for further treatment, observation and support after first aid.
Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.
Eye: Immediately flush with fresh water for 15 minutes.
External: Wash continuously with fresh water for 15 minutes.
Internal: Rinse out mouth, give 1 to 2 cups of water or milk, induce vomiting. After vomiting, give mixture of 2 Tbs. of activated charcoal mixed with one cup of water. Call a physician or poison control at once.

Section 5 — Fire Fighting Measures

Non flammable, non combustible liquid.

NFPA CODE
None Established

Section 6 — Accidental Release Measures

Restrict unprotected personnel from area and ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

Section 7 — Handling and Storage

Flinn Suggested Chemical Storage Pattern: Inorganic #8. Store with borates, chromates, manganates and permanganates.

Section 8 — Exposure Controls , Personal Protection

Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, chemical-resistant gloves and chemical-resistant apron.

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Section 9 — Physical and Chemical Properties

Colorless, odorless solution.

Section 10 — Stability and Reactivity

Avoid contact with acids and metallic salts.
Shelf Life: Indefinite.

Section 11 — Toxicological Information

Acute effects: Possible skin irritant
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD50: N.A.
IHL-RAT LC50: N.A.
SKN-RBT LD50: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

Section 12 — Ecological Information

Data not yet available.

Section 13 — Disposal Considerations

Please consult with state and local regulations.
Flinn Suggested Disposal Method #26b is one option.

Section 14 — Transport Information

Shipping Name: Not regulated
Hazard Class: N/A
UN Number: N/A

N/A = Not applicable

Section 15 — Regulatory Information

Not listed.

Section 16 — Other Information

Consult your copy of the Flinn Scientific Catalog/Reference Manual for additional information about laboratory chemicals. This Material Safety Data Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. Flinn Scientific Inc. assumes no legal responsibility for use or reliance upon this data.

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Flinn MSDS Prevent Chemical Accidents

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 712.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Borate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

Hazard class: Reproductive toxicity (Category 1). May damage fertility or the unborn child (H360). Obtain special instructions before use (P201). Do not handle until all safety precautions have been read and understood (P202). Use personal protective equipment as required (P281).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium tetraborate decahydrate	1303-96-4	$Na_2B_4O_7 \cdot 10H_2O$	381.42	
Synonyms: Borax; Sodium pyroborate; Sodium tetraborate decahydrate				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #8. Store with borates, chromates, manganates and permanganates.
Efflorescent in dry air. Store within a Flinn Chem-Saf™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.
Exposure guidelines: TLV 2 mg/m^3 (inhalable fraction) (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White crystals or powder. Odorless.
Soluble: Water and glycerol. Insoluble in alcohol.

Melting point: 75 ^{o}C (decomposes)
Specific gravity: 1.73

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Poor, efflorescent in dry air. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant
Chronic effects: N.A.
Target organs: Central nervous system, kidneys

ORL-RAT LD_{50}: 2660 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: >2 g/kg

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (215-540-4).

SECTION 16 — OTHER INFORMATION

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Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 714.00

Revision Date: January 16, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Bromide

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral and dermal (Category 5). May be harmful if swallowed or in contact with skin (H303+H313).

Hazard class: Serious eye damage or irritation (Category 2B). Causes eye irritation (H320).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium bromide	7647-15-6	NaBr	102.90	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Absorbs moisture from air. Keep container tightly closed. Store in a cool, dry place within a Flinn Chem-Saf™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White crystalline solid. Odorless.
Soluble: Water. Slightly in alcohol.

Boiling point: 1390 ^{o}C
Melting point: 747 ^{o}C
Specific gravity: 3.20

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with acids.
Shelf life: Fair, absorbs moisture from air. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant
Chronic effects: N.A.
Target organs: Central nervous system

ORL-RAT LD_{50}: 3500 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: 2000 mg/kg

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-599-9).

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: January 16, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 716.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Carbonate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

Hazard class: Skin corrosion or irritation (Category 3). Causes mild skin irritation (H316).

Hazard class: Serious eye damage or irritation (Category 2A). Causes serious eye irritation (H319).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium carbonate, anhydrous	497-19-8	Na_2CO_3	105.99	
Synonym: Soda ash				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Wash with plenty of water. **If skin irritation occurs**: Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Do not allow solid to become airborne. Ventilate area. Wipe up, place in sealed bag or container and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates.
Hygroscopic. Keep container tightly closed. Store in Flinn Chem-Saf™ bag. Store in a cool dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White crystals or powder. Odorless.
Soluble: Water and glycerol. Insoluble in alcohol.

Melting point: 856 ^{o}C
Specific gravity: 2.54

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with acids, aluminum. Reacts vigorously with fluorine.
Shelf life: Fair, hygroscopic. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant
Chronic effects: N.A.
Target organs: Investigated as a mutagen.

ORL-RAT LD_{50}: 4090 mg/kg
IHL-RAT LC_{50}: 2300 mg/m^3 2 Hour
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

LC_{50} 96 Hr *Lepomis macrochirus*: 300 mg/L

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (207-838-8).

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 722.00

Revision Date: January 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Chloride Solution

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **N/A**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

Product should be treated as a chemical and is not for consumption as it has been stored with other nonfood-grade chemicals.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium chloride	7647-14-5	NaCl	58.45	0.6-10%
Water	7732-18-5	H_2O	18.00	90-99%

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless liquid. Odorless.

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Good, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant, dehydration.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 3000 mg/kg as sodium chloride
IHL-RAT LC_{50}: >42 g/m^3 1Hr as sodium chloride
SKN-RBT LD_{50}: >10 mg/kg as sodium chloride

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

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Revision Date: January 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 721.00

Revision Date: February 6, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Chloride

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

Product should be treated as a chemical and is not for consumption as it has been stored with other nonfood-grade chemicals.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium chloride	7647-14-5	NaCl	58.45	
Synonym: Table salt				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If skin irritation occurs: Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Noncombustible solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Somewhat hygroscopic. Keep container tightly closed. Store in a cool dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White crystalline powder. Odorless.
Soluble: Water. Slightly in alcohol.

Boiling point: 1465 ^{o}C
Melting point: 801 ^{o}C
Specific gravity: 2.17
Not for human use.

SECTION 10 — STABILITY AND REACTIVITY

Reacts violently with bromine trifluoride and lithium. Avoid contact with strong oxidizers, acids, bromine.
Shelf life: Fair, somewhat hygroscopic. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant, dehydration.
Chronic effects: N.A.
Target organs: Investigated as a mutagen, reproductive effecter.

ORL-RAT LD_{50}: 3000 mg/kg
IHL-RAT LC_{50}: >42 g/m^3 1Hr
SKN-RBT LD_{50}: >10 mg/kg

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-598-3).

SECTION 16 — OTHER INFORMATION

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Revision Date: February 6, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 723.10

Revision Date: March 25, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Chromate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 3). Toxic if swallowed (H301). Do not eat, drink or smoke when using this product (P270). Do not breathe dust or fumes (P260).
Hazard class: Acute toxicity, dermal (Category 4). Harmful in contact with skin (H312).
Hazard class: Acute toxicity, inhalation (Category 2). Fatal if inhaled (H330). Do not breathe dust or fumes. (P260).
Hazard class: Skin corrosion or irritation (Category 1). Causes severe skin burns and eye damage (H314).
Hazard class: Sensitization, skin and respiratory tract (Category 1). May cause an allergic skin reaction, allergy or asthma symptoms or breathing difficulties if inhaled (H317+H334).
Hazard class: Carcinogenicity, Germ cell mutagenicity, Reproductive toxicity (Category 1). May cause cancer (H350). May cause genetic defects (H340). May damage fertility or the unborn child (H360). Obtain special instructions before use (P201). Do not handle until all safety precautions have been read and understood (P202). Use personal protective equipment as required (P281). Sodium chromate is a known human carcinogen (IARC -1).
Hazard class: Specific target organ toxicity, repeated exposure (Category 1). Causes damage to organs (H372).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium chromate, anhydrous	7775-11-3	Na_2CrO_4	161.97	
Synonym: Chromic acid, disodium salt				

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340). Immediately call a POISON CENTER or physician (P310). **If experiencing respiratory symptoms:** Call a POISON CENTER or physician (P342 +P311). **If in eyes:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If on skin (or hair):** Immediately remove all contaminated clothing. Rinse skin with water (P303 +P361+P353). Wash contaminated clothing before reuse (P363). **If swallowed:** Rinse mouth. Do NOT induce vomiting (P301

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
Strong oxidizer, fire and explosion hazard when in contact with combustible materials.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #8. Store with borates, chromates, manganates and permanganates. Somewhat deliquescent. Keep container tightly closed (P233). Store in a locked poisons cabinet. Use only in a hood or well ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271). In case of inadequate ventilation, wear respiratory protection (P285).
Exposure guidelines: (as chromates) (inhalable) PEL 0.005 mg/m^3 (OSHA); TLV 0.05 mg/m^3 (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Yellow, translucent crystals. Odorless.
Soluble: Water. Slightly in alcohol.

Melting point: 792 ^oC
Specific gravity: 2.72

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with acids, bases, reducers, combustible materials, organic materials, metals, alkalies, alcohols, acetone, hydrazine, hydroxylamine salts, mercury cyanide, calcium hydroxide, ethylene glycol, oils, grease, oxidizing agents, carbides, sulfur, aluminum, boron, silicon, acetic anhydride, amines, paper, and wood. Shelf life: Fair. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Somnolence, skin and eye irritation, severe damage to mucous membranes, readily absorbed through the skin.
Chronic effects: Mutagen, carcinogen (IARC-1, NTP known).
Target organs: Lungs, kidneys.

ORL-RAT LD_{50}: 136 mg/kg
IHL-RAT LC_{50}: 100 mg/m^3/4H
SKN-RBT LD_{50}: 1600 mg/kg

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #12a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-889-5), RCRA code D001, D007.

SECTION 16 — OTHER INFORMATION

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Revision Date: March 25, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 732.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Fluoride

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 3). Toxic if swallowed (H301). Do not eat, drink or smoke when using this product (P270).

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium fluoride	7681-49-4	NaF	41.99	

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Rinse cautiously with water for several minutes (P351).
If swallowed: Rinse mouth. Immediately call a POISON CENTER or physician (P301+P330+P310).

SECTION 5 — FIRE FIGHTING MEASURES

Noncombustible solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
H-3
F-0
R-0

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Do not allow solid to become airborne. Ventilate area. Wipe up, place in sealed bag or container and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Moisture sensitive material. Store in a cool dry place. Store in a Flinn Chem-Saf™ bag, and lock up in a poison cabinet. Aqueous solutions may etch glass.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).
Exposure guidelines: (solid fluorides) PEL 2.5 mg/m^3 (OSHA).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Clear lustrous crystals or powder. Odorless.
Soluble: Water. Slightly in alcohol.

Boiling point: 1704 ^oC
Melting point: 996 ^oC
Specific gravity: 2.78

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong acids and alkalies, oxidizing agents, and metals.
Shelf life: Indefinite, if stored properly. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Severe skin and eye irritant. Toxic if ingested, abdominal pain, nausea, diarrhea.
Chronic effects: Possible mutagen, calcification of ligaments and spine.
Target organs: Heart, kidneys, bones, nerves, GI system, teeth.

ORL-RAT LD_{50}: 52 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #6 is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Sodium fluoride. Hazard class: 6.1, Keep away from food. UN number: UN1690.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-667-8).

SECTION 16 — OTHER INFORMATION

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Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 735.20

Revision Date: March 25, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Hydroxide Solution, Less than 0.3M

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2B). Causes skin and eye irritation (H315+H320).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium hydroxide	1310-73-2	NaOH	39.997	0.4-1.1%
Water	7732-18-5	H_2O	18.00	98-99%

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Wash with plenty of water (P302+P352). **If skin irritation occurs:** Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates.
Keep container tightly closed.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).
Exposure guidelines: (as sodium hydroxide) PEL 2 mg/m^3 (OSHA); Ceiling 2 mg/m^3 (ACGIH); IDLH 10 mg/m^3

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless liquid. Odorless.

pH: basic

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Good, if kept tightly closed.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Skin and eye irritation.
Chronic effects: N.A.
Target organs: Skin and eyes.

ORL-RBT $\mathbf{LDL_0}$: 500 mg/kg (as sodium hydroxide)
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: 50 mg/24H (as sodium hydroxide)

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #10 is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Sodium hydroxide solution. Hazard class: B, Corrosive. UN number: UN1824.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 25, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 735.00

Revision Date: March 25, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Hydroxide Solution, 0.3M - 6.0M

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin corrosion or irritation (Category 1). Causes severe skin burns and eye damage (H314). Do not breathe mist, vapors or spray (P260).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium hydroxide	1310-73-2	NaOH	39.997	1.2-24%
Water	7732-18-5	H_2O	18.00	76-98%

SECTION 4 — FIRST AID MEASURES

Immediately call a POISON CENTER or physician (P310).
If inhaled: Remove victim to fresh air in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If on skin (or hair):** Immediately remove all contaminated clothing. Rinse skin with water (P303+P361 +P353). Wash contaminated clothing before reuse (P363).
If swallowed: Rinse mouth. Do NOT induce vomiting (P301+P330+P331).

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. Absorb spills to prevent material damage (P390). See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates.
Keep container tightly closed. Keep only in original container (P234).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).
Exposure guidelines: (as sodium hydroxide) PEL 2 mg/m^3 (OSHA); Ceiling 2 mg/m^3 (ACGIH); IDLH 10 mg/m^3

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Clear, colorless liquid. Odorless.

pH: basic

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Good, if kept tightly closed.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Eye and skin burns. Mucous membrane irritant.
pneumonitis.
Chronic effects: N.A.
Target organs: Eyes, skin, respiratory system.

ORL-RBT $\mathbf{LDL_0}$: 500 mg/kg (as sodium hydroxide)
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: 50 mg/24H (as sodium hydroxide)

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #10 is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Sodium hydroxide solution. Hazard class: B, Corrosive. UN number: UN1824.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

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Revision Date: March 25, 2014

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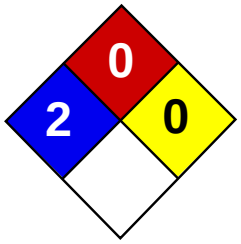

Health	2
Fire	0
Reactivity	0
Personal Protection	

Material Safety Data Sheet
Sodium Hydroxide, 5.0N MSDS

Section 1: Chemical Product and Company Identification

Product Name: Sodium Hydroxide, 5.0N

Catalog Codes: SLS1879

CAS#: Mixture.

RTECS: Not applicable.

TSCA: TSCA 8(b) inventory: Sodium hydroxide; Water

CI#: Not applicable.

Synonym:

Chemical Name: Not applicable.

Chemical Formula: Not applicable.

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Sodium hydroxide	1310-73-2	20
Water	7732-18-5	80

Toxicological Data on Ingredients: Sodium hydroxide LD50: Not available. LC50: Not available.

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of skin contact (corrosive, irritant), of eye contact (irritant), of ingestion. Hazardous in case of inhalation. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:
Non-corrosive for skin. Non-irritant for skin. Non-sensitizer for skin. Non-permeator by skin. Non-irritating to the eyes. Non-hazardous in case of ingestion. Non-hazardous in case of inhalation. CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to lungs, mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe

skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Finish by rinsing thoroughly with running water to avoid a possible infection. Cold water may be used.

Skin Contact:
If the chemical got onto the clothed portion of the body, remove the contaminated clothes as quickly as possible, protecting your own hands and body. Place the victim under a deluge shower. If the chemical got on the victim's exposed skin, such as the hands : Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cold water may be used. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion:
Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not applicable.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill:

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: Neutralize the residue with a dilute solution of acetic acid.

Large Spill:
Corrosive liquid. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralize the residue with a dilute solution of acetic acid. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep container dry. Do not breathe gas/fumes/ vapour/spray. Never add water to this product In case of insufficient ventilation, wear suitable respiratory equipment If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes Keep away from incompatibles such as moisture.

Storage:
Alkalis may be stored in heavy duty gauge steel containers. Corrosive materials should be stored in a separate safety storage cabinet or room.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Personal Protection:
Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Boots.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
Sodium hydroxide CEIL: 2 (mg/m3) from ACGIH [1995] Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Odorless.

Taste: Not available.

Molecular Weight: Not applicable.

Color: Clear Colorless.

pH (1% soln/water): Basic.

Boiling Point: The lowest known value is 100°C (212°F) (Water).

Melting Point: Not available.

Critical Temperature: Not available.

Specific Gravity: Weighted average: 1.12 (Water = 1)

Vapor Pressure: The highest known value is 17.535 mm of Hg (@ 20°C) (Water).

Vapor Density: The highest known value is 0.62 (Air = 1) (Water).

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water.

Solubility: Easily soluble in cold water, hot water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Corrosivity: Slightly corrosive to corrosive in presence of glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
LD50: Not available. LC50: Not available.

Chronic Effects on Humans: The substance is toxic to lungs, mucous membranes.

Other Toxic Effects on Humans:
Very hazardous in case of skin contact (corrosive, irritant), of ingestion. Hazardous in case of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: CLASS 8: Corrosive liquid.

Identification: : Sodium hydroxide, solution (Sodium hydroxide) : UN1824 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
Pennsylvania RTK: Sodium hydroxide Massachusetts RTK: Sodium hydroxide TSCA 8(b) inventory: Sodium hydroxide; Water

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):
CLASS D-2A: Material causing other toxic effects (VERY TOXIC). CLASS E: Corrosive liquid.

DSCL (EEC): R35- Causes severe burns.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 0

Reactivity: 0

Personal Protection:

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Face shield.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/10/2005 12:04 PM

Last Updated: 06/09/2012 12:00 PM

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 734.00

Revision Date: March 25, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Hydroxide

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin corrosion or irritation (Category 1). Causes severe skin burns and eye damage (H314). Do not breathe mist, vapors or spray (P260).

Hazard class: Corrosive to metals (Category 1). May be corrosive to metals (H290).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium hydroxide	1310-73-2	NaOH	39.997	

SECTION 4 — FIRST AID MEASURES

Immediately call a POISON CENTER or physician (P310).
If inhaled: Remove victim to fresh air in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If on skin (or hair):** Immediately remove all contaminated clothing. Rinse skin with water (P303+P361 +P353). Wash contaminated clothing before reuse (P363).
If swallowed: Rinse mouth. Do NOT induce vomiting (P301+P330+P331).

SECTION 5 — FIRE FIGHTING MEASURES

Noncombustible solid.
Hot molten sodium hydroxide can react violently with water. Contact with aluminum, tin, and zinc liberates hydrogen gas. When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
H-3
F-0
R-1

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. Absorb spills to prevent material damage (P390). See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates.
Absorbs CO_2 and water from air. Keep container tightly closed. Keep only in original container (P234).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).
Exposure guidelines: PEL 2 mg/m^3 (OSHA); Ceiling 2 mg/m^3 (ACGIH); IDLH 10 mg/m^3

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White pellets or flakes. Absorbs CO_2 and water from air.
Odorless.
Soluble: Water and alcohol

Boiling point: 1388 ^oC
Melting point: 323 ^oC
pH: basic
Specific gravity: 2.13

SECTION 10 — STABILITY AND REACTIVITY

Contact with aluminum, tin, and zinc liberates, hydrogen gas. Avoid contact with strong oxidizers, strong acids, organic material, chlorinated solvents.
Shelf life: Good, if kept tightly closed. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Eye and skin burns. Mucous membrane irritant. pneumonitis.
Chronic effects: N.A.
Target organs: Eyes, skin, respiratory system.

ORL-RBT $\mathbf{LDL_0}$: 500 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: 50 mg/24H

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #10 is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Sodium hydroxide, solid. Hazard class: 8, Corrosive. UN number: UN1823.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (215-185-5), RCRA code D002, D003.

SECTION 16 — OTHER INFORMATION

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Revision Date: March 25, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 736.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Hypochlorite Solution

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin and eye damage, corrosion or irritation (Category 1B). Causes severe skin burns and eye damage (H314).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium hypochlorite	7681-52-9	NaOCl	74.44	5-12.5%
Water	7732-18-5	H_2O	18.00	87.5-95%
Synonym: Bleach solution				

SECTION 4 — FIRST AID MEASURES

Get medical advice or attention (P313). **If inhaled:** Remove victim to fresh air and keep at rest in a position comfortable for breathing.(P304+P340). **If in eyes:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Wash with plenty of soap and water (P302+P352). **If skin irritation occurs:** Get medical advice or attention (P332 +P313). Take off contaminated clothing and wash before reuse (P362).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.
Strong oxidizer. Fire risk in contact with organic materials.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #6. Store with chlorates, bromates, iodates, chlorites, perchloric acid, and peroxides.
Keep container tightly closed.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless, lightly cloudy liquid. Bleach odor.

pH: basic

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with excessive heat, reducers, strong mineral acids.
Shelf life: Poor.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Skin, eye and respiratory tract irritation and corrosion, nausea, vomiting, somnolence.
Chronic effects: N.A.
Target organs: Skin, eyes, and respiratory tract.

ORL-MUS LD_{50}: 5800 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 739.00

Revision Date: January 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Iodide Solution

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **N/A**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium iodide	7681-82-5	NaI	149.894	1.5-7.5%
Water	7732-18-5	H_2O	18.00	92.5-98.5%

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Changes color when exposed to light. Store away from all sources of light.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless liquid. Changes color when exposed to light. Odorless.

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Good, if stored properly. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: Thyroid.

ORL-RAT LD_{50}: 4340 as sodium iodide
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

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Revision Date: January 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 738.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Iodide

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium iodide	7681-82-5	NaI	149.894	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Wash with plenty of water (P302+P352). **If skin irritation occurs:** Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Deliquescent and light sensitive. Store in a cool, dry place within a Flinn Chem-Saf™ bag, away from light.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White crystals or powder. Slowly turns brown in air. Odorless.
Soluble: Water, alcohol and glycerol

Boiling point: 1304 ^{o}C
Melting point: 661 ^{o}C
Specific gravity: 3.67

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong acids.
Shelf life: Fair to poor, deliquescent and light sensitive. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: Thyroid.

ORL-RAT LD_{50}: 4340 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-674-3).

SECTION 16 — OTHER INFORMATION

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Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 744.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Nitrate Solution

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin corrosion or irritation (Category 2). Causes skin irritation (H315).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium nitrate	7631-99-4	$NaNO_3$	84.99	0.8-8%
Water	7732-18-5	H_2O	18.00	92-99%

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water (P302+P352). **If skin irritation occurs:** Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #3. Store with amides, nitrates, nitrites and azides.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless liquid. Odorless.

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant.
Chronic effects: N.A.
Target organs: Blood, central nervous system.

ORL-RAT LD_{50}: 3236 mg/kg as sodium nitrate
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 743.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

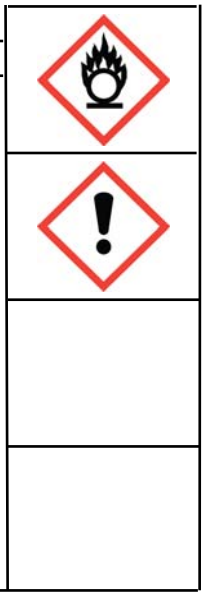
Sodium Nitrate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Oxidizing solids (Category 3). May intensify fire; oxidizer (H272). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Acute toxicity, oral (Category 4). Harmful if swallowed (H302). Do not eat, drink or smoke when using this product (P270).

Hazard class: Skin corrosion/irritation (Category 2). Causes skin irritation (H315).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium nitrate	7631-99-4	$NaNO_3$	84.99	
Synonym: Chile saltpeter				

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Rinse cautiously with water for several minutes (P351).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell (P301+P330+P312).

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
Strong oxidizer. Fire and explosion risk when in contact with combustible materials.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #3. Store with amides, nitrates, nitrites and azides.
Store in a cool dry place. Keep away from combustible materials (P220). Take any precautions to avoid mixing with combustibles (P221).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, eye protection, and face protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless transparent crystals. Odorless.
Soluble: Water and glycerol. Slightly in alcohol.

Boiling point: 380 ^{o}C (decomposes)
Melting point: 306.5 ^{o}C
Specific gravity: 2.261

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong reducers, strong acids, combustible materials, finely powdered metals, friction and shock.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Toxic, irritant.
Chronic effects: Anemia, methemoglobinemia, nephritis.
Target organs: Blood, central nervous system.

ORL-RAT LD_{50}: 1267 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Sodium nitrate. Hazard class: 5.1, Oxidizer. UN number: UN1498.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-554-3), RCRA code D001.

SECTION 16 — OTHER INFORMATION

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Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 745.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Nitrite

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Oxidizing solids (Category 3). May intensify fire; oxidizer (H272). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Acute toxicity, oral and inhalation (Category 3). Toxic if swallowed or inhaled (H301+H331). Do not eat, drink or smoke when using this product (P270). Avoid breathing dust or fumes (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium nitrite	7632-00-0	$NaNO_2$	69.0	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Immediately call a POISON CENTER or physician (P301+P330+P310).

SECTION 5 — FIRE FIGHTING MEASURES

Flammable solid.
Strong oxidizer. Fire and explosion risk when in contact with combustible materials.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #3. Store with amides, nitrates, nitrites and azides.
Hygroscopic. Store in a cool dry place within a Flinn Chem-Saf™ bag, and lock up in a poison cabinet. Keep away from combustible materials (P220). Take any precautions to avoid mixing with combustibles (P221). Keep container tightly closed (P233). Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling. Use only in a hood or well-ventilated area (P271). Wear respiratory protection (P284).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White or very slightly yellowish crystals or powder. Odorless.
Soluble: Water. Slightly in alcohol.
0

Melting point: 271 ^{o}C [>320 ^{o}C (decomposes)]
pH: Basic
Specific gravity: 2.17

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong reducers, finely powdered metals, combustible materials, and strong acids.
Shelf life: Indefinite, but hygroscopic. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Toxic, irritant.
Chronic effects: Possible mutagen.
Target organs: Blood, cardiovascular system.

ORL-RAT LD_{50}: 180 mg/kg
IHL-RAT LC_{50}: 5500 ug/m^3
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #12b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Sodium nitrite. Hazard class: 5.1, Oxidizer. UN number: UN1500.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-555-9), RCRA code D001.

SECTION 16 — OTHER INFORMATION

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 747.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Oxalate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral and dermal (Category 4). Harmful if swallowed or in contact with skin (H302 +H312). Do not eat, drink, or smoke when using this product (P270).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium oxalate	62-76-0	$Na_2C_2O_4$	134.00	
Synonym: Oxalic acid, sodium salt				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. (P301+P330).

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Hygroscopic. Store in a cool dry place within a Flinn Chem-Saf™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White, crystalline powder. Odorless.
Soluble: Water. Insoluble in alcohol.

Melting point: 250-270 ^{o}C (decomposes)
Specific gravity: 2.34

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with oxidizing agents.
Shelf life: Poor, hygroscopic. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Corrosive.
Chronic effects: N.A.
Target organs: Kidneys, nerves.

ORL-RAT LD_{50}: 11160 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Toxic Solids, Organic, n.o.s. Hazard class: 6.1, Keep away from food. UN number: UN2811.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed; EINECS-listed (200-550-3).

SECTION 16 — OTHER INFORMATION

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 751.10

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Phosphate, Dibasic

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

Hazard class: Specific target organ toxicity, single exposure; Respiratory tract irritation (Category 3). May cause respiratory irritation (H335). Avoid breathing dust or fumes (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium phosphate dibasic, anhydrous	7558-79-4	Na_2HPO_4	141.96	
Synonyms: DSP, Disodium hydrogen phosphate				

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Rinse cautiously with water for several minutes (P351).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Hygroscopic. Keep container tightly closed. Store in a cool, dry place within a Flinn Chem-Saf™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless, translucent crystals or powder. Odorless.
Soluble: Hot water. Insoluble in alcohol.

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong acids.
Shelf life: Poor, hygroscopic. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 17 g/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-448-7).

SECTION 16 — OTHER INFORMATION

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Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 752.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Phosphate, Monobasic

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium phosphate monobasic monohydrate	10049-21-5	$NaH_2PO_4 \cdot H_2O$	137.99	
Synonym: Sodium dihydrogen phosphate, monohydrate				

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Rinse cautiously with water for several minutes (P351).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Slightly hygroscopic. Keep container tightly closed. Store in a cool, dry place within a Flinn Chem-Saf™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Large transparent crystals. Odorless.
Soluble: Water. Insoluble in alcohol.

Melting point: 100 ^{o}C (loses water)
pH: acidic
Specific gravity: 2.040

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong acids.
Shelf life: Fair, slightly hygroscopic. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 8290 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-449-2).

SECTION 16 — OTHER INFORMATION

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Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 755.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Phosphate, Tribasic, Solution

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2B). Causes skin and eye irritation (H315+H320).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium phosphate tribasic, dodecahydrate	10101-89-0	$Na_3PO_4 \cdot 12H_2O$	380.12	12% or less
Water	7732-18-5	H_2O	18.00	88%+
Synonym: TSP solution; Trisodium phosphate solution				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Wash with plenty of water (P302+P352). **If skin irritation occurs:** Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless liquid. Odorless.

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 6500 mg/kg as TSP
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 754.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Phosphate, Tribasic

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin corrosion or irritation (Category 1). Causes severe skin burns and eye damage (H314). Do not breathe dust or fumes (P260).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium phosphate tribasic, dodecahydrate Synonyms: TSP; Trisodium phosphate; Sodium phosphate, dodecahydrate	10101-89-0	$Na_3PO_4 \cdot 12H_2O$	380.12	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338).
If on skin (or hair): Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353).
If swallowed: Rinse mouth. Do NOT induce vomiting (P301+P330+P331).

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Store in a cool dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless crystals. Odorless.
Soluble: Water

Melting point: 75 ^{o}C (decomposes)
Specific gravity: 1.62

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong acids.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Corrosive.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 7400 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: >7940 mg/kg

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-509-8).

SECTION 16 — OTHER INFORMATION

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 755.10

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Polyacrylate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Serious eye damage or irritation (Category 2A). Causes serious eye irritation (H319).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium polyacrylate	9003-04-7	$C_3H_3NaO_2$	94.04	
Synonym: Waterlock				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #3. Store with hydrocarbons, oils, esters and aldehydes.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White, fine powder. Odorless.
Soluble: Swells in water

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizing agents.
Shelf life: Good, if kept dry.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritating dust.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: >40 g/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 652.00

Revision Date: January 16, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Potassium Sodium Tartrate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **N/A**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Potassium sodium tartrate	6381-59-5	$KNaC_4H_4O_6 \cdot 4H_2O$	282.23	
Synonym: Rochelle salt				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Efflorescent. Store in a cool, dry place within a Flinn Chem-Saf™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless, transparent crystals or white powder. Odorless.
Soluble: Water. Insoluble in alcohol.

Boiling point: 215 ^{o}C
Melting point: 70-80 ^{o}C
Specific gravity: 1.79

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers.
Shelf life: Fair to poor, efflorescent. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (206-156-8).

SECTION 16 — OTHER INFORMATION

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 758.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Silicate Solution

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 5). May be harmful if swallowed (H303).

Hazard class: Skin corrosion or irritation (Category 1). Causes severe skin burns and eye damage (H314). Do not breathe mist, vapors or spray (P260).

Hazard class: Specific target organ toxicity, single exposure; respiratory tract irritation (Category 3). May cause respiratory irritation (H335).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium silicate solution, 40-42 Be Synonym: Water glass	None established			

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338).
If on skin (or hair): Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353).
If swallowed: Rinse mouth. Do NOT induce vomiting (P301+P330+P331).

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Keep container tightly closed (P233). Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Slightly cloudy liquid; rather viscous. Odorless.

Specific gravity: 1.3-1.5

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong mineral acids, strong organic acids, aluminum, magnesium, and zinc.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 1960 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

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Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 759.00

Revision Date: January 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Sulfate, Decahydrate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, dermal (Category 5). May be harmful in contact with skin (H313).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium sulfate decahydrate	7727-73-3	$Na_2SO_4 \cdot 10H_2O$	322.19	
Synonym: Glauber's salt				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Efflorescent. Keep container tightly closed. Loses all waters of hydration at 100 ^{o}C.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Large crystals or small needles or granular powder. Odorless.
Soluble: Water and glycerol. Insoluble in alcohol.

Melting point: 33 ^{o}C (liquefies)
Specific gravity: 1.464

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong acids, aluminum, and magnesium.
Shelf life: Indefinite, if stored properly. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant.
Chronic effects: N.A.
Target organs: N.A.

ORL-MUS LD_{50}: 5989 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-820-9).

SECTION 16 — OTHER INFORMATION

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 760.00

Revision Date: January 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Sulfate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, dermal (Category 5). May be harmful in contact with skin (H313).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium sulfate, anhydrous	7757-82-6	Na_2SO_4	142.02	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Sweep up, place in sealed bag or container and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Store in a cool dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White, crystals or powder. Odorless.
Soluble: Water and glycerol. Insoluble in alcohol.

Melting point: 884 ^{o}C
Specific gravity: 2.680

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong acids, aluminum, and magnesium.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant.
Chronic effects: N.A.
Target organs: N.A.

ORL-MUS LD_{50}: 5989 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed; EINECS-listed (231-820-9).

SECTION 16 — OTHER INFORMATION

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Material Safety Data Sheet (MSDS)

MSDS #: 761.00
Revision Date: April 2, 2001

Section 1 — Chemical Product and Company Identification

Sodium Sulfate Solution

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Section 2 — Composition, Information on Ingredients

Sodium Sulfate (7757-82-6) 1-14%, Water (7732-18-5) 86-99%

CAS#: None Established

Section 3 — Hazards Identification

Colorless, odorless solution.
Substance not considered hazardous. However, not all health aspects of this substance have been thoroughly investigated.

FLINN AT-A-GLANCE
Health-0
Flammability-0
Reactivity-0
Exposure-0
Storage-0

0 is low hazard, 3 is high hazard

Section 4 — First Aid Measures

Call a physician, seek medical attention for further treatment, observation and support after first aid.
Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.
Eye: Immediately flush with fresh water for 15 minutes.
External: Wash continuously with fresh water for 15 minutes.
Internal: Give large quantities of water. Call a physician or poison control at once.

Section 5 — Fire Fighting Measures

Non combustible liquid.

NFPA CODE
None established

Section 6 — Accidental Release Measures

Restrict unprotected personnel from area and ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

Section 7 — Handling and Storage

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates.

Section 8 — Exposure Controls , Personal Protection

Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, chemical-resistant gloves and chemical-resistant apron.

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Section 9 — Physical and Chemical Properties

Colorless, odorless solution.
Concentration: 0.1 to 1.0 Molar

Section 10 — Stability and Reactivity

Shelf Life: Indefinite.

Section 11 — Toxicological Information

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD50: N.A.
IHL-RAT LC50: N.A.
SKN-RBT LD50: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

Section 12 — Ecological Information

Data not yet available.

Section 13 — Disposal Considerations

Please consult with state and local regulations.
Flinn Suggested Disposal Method #26b is one option.

Section 14 — Transport Information

Shipping Name: Not regulated
Hazard Class: N/A
UN Number: N/A

N/A = Not applicable

Section 15 — Regulatory Information

Not listed.

Section 16 — Other Information

Consult your copy of the Flinn Scientific Catalog/Reference Manual for additional information about laboratory chemicals. This Material Safety Data Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. Flinn Scientific Inc. assumes no legal responsibility for use or reliance upon this data.

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Material Safety Data Sheet (MSDS)

MSDS #: 762.00
Revision Date: March 15, 2001

Section 1 — Chemical Product and Company Identification

Sodium Sulfide

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Section 2 — Composition, Information on Ingredients

Sodium Sulfide, nonahydrate

CAS#: 1313-84-4

Section 3 — Hazards Identification

Colorless to slightly yellow crystals or lumps. Odor of rotten eggs (hydrogen sulfide).
Moderately toxic by ingestion or inhalation. Corrosive to body tissue.
Flammable solid. Liberates toxic hydrogen sulfide on contact with acids.
If ingested, contact with stomach acids can liberate toxic hydrogen sulfide gas.

FLINN AT-A-GLANCE
Health-2
Flammability-2
Reactivity-2
Exposure-2
Storage-2

0 is low hazard, 3 is high hazard

Section 4 — First Aid Measures

Call a physician, seek medical attention for further treatment, observation and support after first aid.
Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.
Eye: Immediately flush with fresh water for 15 minutes.
External: Wash continuously with fresh water for 15 minutes.
Internal: Rinse out mouth, give 1 to 2 cups of water or milk, induce vomiting. Call a physician or poison control at once.

Section 5 — Fire Fighting Measures

Flammable solid.
When heated to decomposition, emits toxic SOx and sulfur fumes.
Fire Fighting Instructions: Use triclass, dry chemical fire extinguisher. Firefighters should wear PPE and SCBA with full facepiece operated in positive pressure mode.

NFPA CODE
None established

Section 6 — Accidental Release Measures

Restrict unprotected personnel from area. Remove all ignition sources and ventilate area. Contain spill with sand and absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

Section 7 — Handling and Storage

Flinn Suggested Chemical Storage Pattern: Inorganic #5. Store with sulfides, phosphides, carbides and nitrides.
Air and light sensitive. Store in a cool, dry place. Store in a Flinn Chem-Saf bag and then inside a Flinn Saf-Stor can.
Use and dispense in a hood.

Section 8 — Exposure Controls , Personal Protection

Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, chemical-resistant gloves and chemical-resistant apron.

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Section 9 — Physical and Chemical Properties

Colorless to slightly yellow crystals or lumps.
Odor of rotten eggs (hydrogen sulfide).
Solubility: Water; slightly in alcohol.
Formula: Na2S 9H2O
Formula Weight: 240.18

Specific Gravity:1.427

Section 10 — Stability and Reactivity

Avoid contact with acids, oxidizers, aluminum, copper, zinc, and their alloys.
Shelf Life: Fair to poor; deliquescent.

Section 11 — Toxicological Information

Acute effects: Highly toxic, corrosive
Chronic effects: N.A.
Target organs: Nerves, cardiovascular system

ORL-RAT LD50: N.A.
IHL-RAT LC50: N.A.
SKN-RBT LD50: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

Section 12 — Ecological Information

Data not yet available.

Section 13 — Disposal Considerations

Please consult with state and local regulations.
Flinn Suggested Disposal Method #23 is one option.

Section 14 — Transport Information

Shipping Name: Sodium Sulfide, hydrated
Hazard Class: 8, Corrosive
UN Number: UN1849

N/A = Not applicable

Section 15 — Regulatory Information

TSCA-listed, EINECS-listed (215-211-5), RCRA code D001, D002, D003.

Section 16 — Other Information

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 764.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Sulfite

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral and inhalation (Category 5). May be harmful if swallowed or inhaled (H303 +H333).

Hazard class: Serious eye damage or irritation (Category 2B). Causes eye irritation (H320).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium sulfite	7757-83-7	Na_2SO_3	126.05	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If eye irritation persists: Get medical advice or attention (P337+P313).
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Sweep up, place in sealed bag or container and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Air and moisture sensitive. Keep container tightly closed. Store in a Flinn Chem-Saf™ bag. Store in a cool dark place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White crystals or powder. Odorless.
Soluble: Water. Insoluble in alcohol.

Specific gravity: 2.633

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with acids and strong oxidizers.
Shelf life: Fair, moisture sensitive. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant.
Chronic effects: Possible mutagen.
Target organs: N.A.

ORL-MUS LD_{50}: 820 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Aquatic Toxicity: 2600 ppm / 24, 48, 96hr / mosquito fish / TLM / fresh water B.O.D.: 0.12 lb/lb instantaneous

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #12b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed; EINECS-listed (231-821-4); RCRA code D003.

SECTION 16 — OTHER INFORMATION

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Revision Date: March 21, 2014

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Material Safety Data Sheet (MSDS)

MSDS #: 767.00
Revision Date: March 12, 2001

Section 1 — Chemical Product and Company Identification

Sodium Thiocyanate

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Section 2 — Composition, Information on Ingredients

Sodium Thiocyanate

CAS#: 540-72-7

Section 3 — Hazards Identification

Colorless crystals or white powder; deliquescent.
Moderately toxic by ingestion. Body tissue irritant. Avoid all body tissue contact.

FLINN AT-A-GLANCE
Health-2
Flammability-0
Reactivity-1
Exposure-1
Storage-1

0 is low hazard, 3 is high hazard

Section 4 — First Aid Measures

Call a physician, seek medical attention for further treatment, observation and support after first aid.
Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.
Eye: Immediately flush with fresh water for 15 minutes.
External: Wash continuously with fresh water for 15 minutes.
Internal: Give large quantities of water. Call a physician or poison control at once.

Section 5 — Fire Fighting Measures

Non flammable solid.
When heated to decomposition, emits toxic fumes of hydrogen sulfide, hydrogen cyanide, NOx, SOx, and Na2O.
Fire Fighting Instructions: Use triclass, dry chemical fire extinguisher. Firefighters should wear PPE and SCBA with full facepiece operated in positive pressure mode.

NFPA CODE
None established

Section 6 — Accidental Release Measures

Restrict unprotected personnel from area. Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

Section 7 — Handling and Storage

Flinn Suggested Chemical Storage Pattern: Inorganic #7. Store with arsenates, cyanides and cyanates.
Store in a cool, dry place. Light sensitive. Deliquescent, store in a Flinn Chem-Saf bag. Use and dispense in a hood.

Section 8 — Exposure Controls , Personal Protection

Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, chemical-resistant gloves and chemical-resistant apron. Use exhaust ventilation to keep airborne concentrations low.

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Section 9 — Physical and Chemical Properties

Colorless crystals or white powder; deliquescent.
Solubility: Water and alcohol. Hygroscopic.
Formula: NaSCN
Formula Weight: 81.08

Melting Point: 287 C

Section 10 — Stability and Reactivity

Avoid contact with acids and strong bases. Contact with acids or heat may liberate poisonous hydrogen cyanide gas.
Shelf Life: Indefinite.

Section 11 — Toxicological Information

Acute effects: Toxic, irritant
Chronic effects: Possible teratogen
Target organs: N.A.

ORL-RAT LD50: 764 mg/kg
IHL-RAT LC50: N.A.
SKN-RBT LD50: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

Section 12 — Ecological Information

Data not yet available.

Section 13 — Disposal Considerations

Please consult with state and local regulations.
Flinn Suggested Disposal Method #26a is one option.

Section 14 — Transport Information

Shipping Name: Not regulated
Hazard Class: N/A
UN Number: N/A

N/A = Not applicable

Section 15 — Regulatory Information

TSCA-listed, EINECS-listed (208-754-4).

Section 16 — Other Information

Consult your copy of the Flinn Scientific Catalog/Reference Manual for additional information about laboratory chemicals. This Material Safety Data Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. Flinn Scientific Inc. assumes no legal responsibility for use or reliance upon this data.

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 770.00

Revision Date: January 16, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Thiosulfate Solution

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **N/A**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium thiosulfate	10102-17-7	$Na_2S_2O_3$	158.11	12% or less
Water	7732-18-5	H_2O	18.00	88-99%

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless liquid. Odorless.

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 2000 mg/kg as sodium thiosulfate
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #12b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: January 16, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 769.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Thiosulfate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Acute toxicity, oral (Category 4). Harmful if swallowed (H302).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sodium thiosulfate, anhydrous	7772-98-7	$Na_2S_2O_3$	158.11	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Deliquescent. Store in a cool, dry place within a Flinn Chem-Saf™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White granular powder. Odorless.
Soluble: Water. Insoluble in alcohol.

Boiling point: 100 ^{o}C decomposes
Specific gravity: 1.69

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong acids, strong oxidizers, lead, silver, mercury salts and iodine.
Shelf life: Fair to poor, deliquescent. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant.
Chronic effects: N.A.
Target organs: N.A.

ORL-HUM LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #12b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-867-5).

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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Thermo SCIENTIFIC

Part of Thermo Fisher Scientific

Material Safety Data Sheet

Product Name: SoftCIDE™

Date: 08/13/2010

Section 1 - Chemical Product and Company Identification

MSDS Name: SoftCIDE

Catalog Numbers:
21004-12-001, 21016-06-001, 21027-12-001 21032-06-001, 21128-04-001

Synonyms: None Known.

Company Identification:
Erie Scientific LLC
(part of Thermo Fisher Scientific)
20 Post Road
Portsmouth, NH 03801

Emergency Phone Number / CHEMTREC 1-800-424-9300

CHEMTREC Phone Number, Europe:
(202) 483-7616

Company Phone Number:
1-888-374-3724

Section 2 - Composition, Information on Ingredients

Chemical Name: p-Chloro-m-xylenol CAS# 88-04-0 EINECS / ELINCS: 201-793-8 Percent 1%

Section 3 - Hazards Identification

Emergency Overview

Appearance: pearlescent viscous liquid

Potential Health Effects

Eyes: May cause eye irritation.
Skin: May cause mild skin irritation to individuals with sensitive skin.
Ingestion: May cause irritation of the digestive tract.

Section 4 – First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.
Skin: In case of irritation, rinse with plenty of water. If irritation persists, consult a physician.
Ingestion: Do not induce vomiting unless directed to do so by medical personnel. Get medical aid.
Notes to Physician: Treat symptomatically and supportively.

Section 5 – Fire Fighting Measures

Extinguishing Media: Use water spray, dry chemical, carbon dioxide or appropriate foam
Autoignition Temperature: N/A
Explosion Limits: N/A
Flash Point: N/A
NFPA Rating: (estimated) Health: 1; Flammability: 0; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Shovel into leak proof container.

Section 7 - Handling and Storage

Handling: Avoid contact with eyes. Avoid ingestion.
Storage: Normal safe handling and storage procedures.

Section 8 - Exposure Controls, Personal Protection

Exposure Limits
Chemical Name: p-Chloro-m-xylenol

ACGIH: N/A
NIOSH: N/A
OSHA: N/A

OSHA Vacated PELs N/A
Personal Protective Equipment N/A

Section 9 - Physical and Chemical Properties

Physical State: Viscous liquid
Color: pearlescent.
Odor:
pH: N/A
Vapor Pressure: N/A
Vapor Density: N/A
Evaporation Rate: <1
Viscosity: No information found
Boiling Point: 212-214°F
Freezing/Melting Point: N/A
Decomposition Temperature: N/A
Solubility in water: Soluble.
Specific Gravity/Density: 1.0402
Molecular Formula: Solution

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: No specific conditions to avoid noted.
Incompatibilities with Other Materials N/A
Hazardous Decomposition Products N/A
Hazardous Polymerization N/A

Section 11 - Toxicological Information

Product contains Chloroxylenol (PCMX)

RTECS: CAS# 88-04-0: ZE6850000
LD50/LC50: CAS# 88-04-0:
Draize test, rabbit, eye: 100 mg Moderate
Oral, mouse: LD50 = 1 gm/kg
Oral, rat: LD50 = 3830 mg/kg.
Carcinogenicity: CAS# 88-04-0: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Epidemiology: No information found.
Teratogenicity: No information found.
Reproductive: No information found.
Mutagenicity: No information found.
Neurotoxicity: No information found.
Other: The toxicological properties have not been fully investigated.

Section 12 - Ecological Information

No information found

Section 13 - Disposal Considerations

Landfill with all local, state, and federal laws.
RCRA P Series Wastes None of the components are on this list.
RCRA U Series Wastes None of the components are on this list.

Section 14 - Transport Information

US DOT Canadian TDG

Proper Shipping Name: Not regulated as a hazardous material

Section 15 - Regulatory Information

US Federal

TSCA CAS# 88-04-0 is listed on the TSCA Inventory.
Health and Safety Reporting List CAS# 88-04-0: Effective 4/13/89, Sunset 12/19/95

Chemical Test Rules

TSCA Section 12b None of the components are on this list.
TSCA Significant New Use Rule (SNUR) None of the components are on this list.
CERCLA Hazardous Substances and corresponding RQs None of the components are on this list.
SARA Section 302 Extremely Hazardous Substances None of the components are on this list.
SARA Hazard Categories Not evaluated.
SARA Section 313 None of the components are on this list.
Clean Air Act – Hazardous Air Pollutants (HAPs) None of the components are on this list.
Clean Air Act – Class 1 Ozone Depletors None of the components are on this list.
Clean Air Act – Class 2 Ozone Depletors None of the components are on this list.
Clean Water Act – Hazardous Substances None of the components are on this list.
Clean Water Act – Priority Pollutants None of the components are on this list.
Clean Water Act – Toxic Pollutants None of the components are on this list.
OSHA – Highly Hazardous None of the components are on this list.
OSHA – Specifically Regulated Chemicals None of the components are on this list.

US State

State Right to Know
California Prop 65
None of the components are on this list
California No Significant Risk Level
None of the components are on this list

European/International Regulations

European Labeling in Accordance with EC Directives:
Hazard Symbols:
Risk Phrases:
Safety Phrases: S 24/25 Avoid contact with skin and eyes.
WGK (Water Danger/Protection)
United Kingdom Occupational Exposure Limits
United Kingdom Maximum Exposure Limits
Canadian DSL/NDSL
CAS # 88-04-0 is listed on Canada's DSL List.
Canadian WHMIS Classifications
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Section 16 – Other Information

MSDS Creation Date: August 13, 2010
Disclaimer: This MSDS is intended for review and guidance in the receipt, storage, handling, use and disposal of product purchased from Thermo Scientific and for no other purpose. Use this product only as directed and in accordance with applicable instructions and warnings provided with the product. Please consult your institution's policies regarding use of this product. If you have obtained this MSDS other than in connection with the supply of this product from us, this MSDS should be consulted for general information only, and should not be relied upon for any purpose. As with the use of all hazardous materials, you should in all instances follow the guidance of the MSDS provided or available with the specific product purchased.

END OF MSDS

Material Safety Data Sheet

SOLID RINSE DRY

1. Product and company identification

Trade name of product : SOLID RINSE DRY

Product use : Rinse additive

Product dilution information : Up to 44 ppm in water

Supplier's information : Ecolab Inc. Institutional Division
370 N. Wabasha Street
St. Paul, MN 55102
1-800-352-5326

Code : 913566

Date of issue : **24-August-2011**

EMERGENCY HEALTH INFORMATION: 1-800-328-0026
Outside United States and Canada CALL 1-651-222-5352 (in USA)

2. Hazards identification

	Product AS SOLD	Product AT USE DILUTION
Physical state	Waxy solid	Liquid.
Emergency overview	CAUTION !	CAUTION !
	MAY CAUSE EYE AND SKIN IRRITATION.	No specific hazard.
	Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.	No specific hazard.

Potential acute health effects

	Product AS SOLD	Product AT USE DILUTION
Eyes	Moderately irritating to eyes.	No known significant effects or critical hazards.
Skin	Moderately irritating to the skin.	No known significant effects or critical hazards.
Inhalation	No known significant effects or critical hazards.	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.	No known significant effects or critical hazards.

See toxicological information (section 11)

3. Composition/information on ingredients

Product AS SOLD

Name	CAS number	% by weight
UREA	57-13-6	5 - 20
alcohols, c12-15, ethoxylated	68131-39-5	1 - 5

Product AT USE DILUTION

Within the present knowledge of the supplier, this product does not contain any hazardous ingredients in quantities requiring reporting, in accordance with local regulations.

4. First aid measures

	Product AS SOLD	Product AT USE DILUTION
Eye contact	In case of contact, immediately flush eyes with plenty of water. Remove contact lenses and flush again. Get medical attention if irritation persists.	No known effect after eye contact. Rinse with water for a few minutes.
Skin contact	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if irritation persists. Wash clothing before reuse. Clean shoes thoroughly before reuse.	No known effect after skin contact. Rinse with water for a few minutes.
Inhalation	No special measures required. Treat symptomatically.	No special measures required. Treat symptomatically.
Ingestion	Get medical attention if symptoms occur.	Get medical attention if symptoms occur.

5. Fire-fighting measures

Product AS SOLD

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

Fire-fighting media and instructions : Use an extinguishing agent suitable for the surrounding fire.

Dike area of fire to prevent runoff.

No specific fire or explosion hazard.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

	Product AS SOLD	Product AT USE DILUTION
Personal precautions	Use personal protective equipment as required.	Use personal protective equipment as required.
Environmental precautions	Avoid contact of large amounts of spilled material and runoff with soil and surface waterways.	Avoid contact of large amounts of spilled material and runoff with soil and surface waterways.
Methods for cleaning up	Use a water rinse for final clean-up.	Use a water rinse for final clean-up.

7. Handling and storage

	Product AS SOLD	Product AT USE DILUTION
Handling	Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.	Wash thoroughly after handling.
Storage	Keep out of reach of children. Store in a closed container. Do not store above the following temperature: 50°C	Keep out of reach of children.

8. Exposure controls/personal protection

8. Exposure controls/personal protection

	Product AS SOLD	Product AT USE DILUTION
Engineering measures	: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.	Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
Personal protection		
Eyes	: Eye protection should be used when splashing may occur.	No protective equipment is needed under normal use conditions.
Hands	: For prolonged or repeated handling, use the following type of gloves: Impervious gloves.	No protective equipment is needed under normal use conditions.
Skin	: No protective equipment is needed under normal use conditions.	No protective equipment is needed under normal use conditions.
Respiratory	: A respirator is not needed under normal and intended conditions of product use.	No special protection is required.

Consult local authorities for acceptable exposure limits.

9. Physical and chemical properties

	Product AS SOLD	Product AT USE DILUTION
Physical state	: Waxy solid	Liquid.
Flash point	: > 100°C Product does not support combustion.	> 100°C
Color	: Blue [Light]	Colorless
Odor	: Faint odor	Odorless
pH	: 5 to 7.5 [Conc. (% w/w): 1%]	7.5 to 8.5
Dispersibility properties	: Easily dispersible in the following materials: cold water and hot water.	
Solubility	: Easily soluble in the following materials: cold water and hot water.	

10. Stability and reactivity

Product AS SOLD

Stability	: The product is stable. Under normal conditions of storage and use, hazardous polymerization will not occur.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous polymerization	: Under normal conditions of storage and use, hazardous polymerization will not occur.

11. Toxicological information

Potential acute health effects

	Product AS SOLD	Product AT USE DILUTION
Eyes	: Moderately irritating to eyes.	No known significant effects or critical hazards.
Skin	: Moderately irritating to the skin.	No known significant effects or critical hazards.
Inhalation	: No known significant effects or critical hazards.	No known significant effects or critical hazards.
Ingestion	: No known significant effects or critical hazards.	No known significant effects or critical hazards.

12. Ecological information

Ecotoxicity : Not reported

13. Disposal considerations

Product AS SOLD

Waste disposal : Diluted product can be flushed to sanitary sewer. Discard empty container in trash.

Product AT USE DILUTION

Diluted product can be flushed to sanitary sewer. Discard empty container in trash.

14. Transport information

Certain shipping modes or package sizes may have exceptions from the transport regulations. The classification provided may not reflect those exceptions and may not apply to all shipping modes or package sizes.

Product AS SOLD

DOT Classification **Not regulated.**

For transport in bulk or using IMDG regulations, see shipping documents for specific transportation information.

Product AT USE DILUTION

Not intended for transport.

15. Regulatory information

Product AS SOLD

HCS Classification : Irritating material

Product AT USE DILUTION

Not regulated.

Product AS SOLD

U.S. Federal regulations

TSCA 8(b) inventory : All components are listed or exempted.

SARA 302/304/311/312 extremely hazardous substances: No listed substance

SARA 302/304 emergency planning and notification: No listed substance

SARA 313	Product name	CAS number	Concentration
Form R - Reporting requirements :	No listed substance		

California Prop. 65 : No listed substance

16. Other information

Product AS SOLD

Hazardous Material Information System (U.S.A.) :

Health	1
Flammability	0
Physical hazards	0

National Fire Protection Association (U.S.A.) :

Product AT USE DILUTION

Health	0
Flammability	0
Physical hazards	0

16. Other information

Date of issue : **24-August-2011**

Responsible name : **Regulatory Affairs**
1-800-352-5326

◤ **Indicates information that has changed from previously issued version.**

Notice to reader

The above information is believed to be correct with respect to the formula used to manufacture the product in the country of origin. As data, standards, and regulations change, and conditions of use and handling are beyond our control, NO WARRANTY, EXPRESS OR IMPLIED, IS MADE AS TO THE COMPLETENESS OR CONTINUING ACCURACY OF THIS INFORMATION.

MSDS Number: **Z6150** * * * * * *Effective Date:* ***08/24/11*** * * * * * *Supersedes:* ***03/21/11***

MSDS Material Safety Data Sheet

From: Avantor Performance Materials, Inc.
Saucon Valley Plaza
3477 Corporate Parkway
Suite #200
Center Valley, PA 18034

J.T.Baker®

24 Hour Emergency Telephone: 908-859-2151
CHEMTREC: 1-800-424-9300

National Response in Canada
CANUTEC: 613-996-6666

Outside U.S. and Canada
Chemtrec: 703-527-3887

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

All non-emergency questions should be directed to Customer Service, 1-855-AVANTOR (855-282-6867) for assistance.

SOLUSORB® SOLVENT ADSORBENT

1. Product Identification

Synonyms: Activated Carbon
CAS No.: 7440-44-0
Molecular Weight: 12.01
Chemical Formula: C
Product Codes: 4437, 4458

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Steam Activated Carbon	7440-44-0	100%	Yes

3. Hazards Identification

Emergency Overview

CAUTION! ACTIVATED CARBON AFFECTS THE RESPIRATORY AND CARDIOVASCULAR SYSTEMS.

SAF-T-DATA(tm) Ratings (Provided here for your convenience)

Health Rating: 2 - Moderate
Flammability Rating: 1 - Slight
Reactivity Rating: 1 - Slight
Contact Rating: 1 - Slight
Lab Protective Equip: GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES
Storage Color Code: Green (General Storage)

Potential Health Effects

Inhalation:
No adverse effects expected. May cause mild irritation to the respiratory tract.
Ingestion:
No adverse effects expected. May cause mild irritation to the gastrointestinal tract.
Skin Contact:
Not expected to be a health hazard from skin exposure. May cause mild irritation and redness.
Eye Contact:
No adverse effects expected. May cause mild irritation, possible reddening.
Chronic Exposure:
Prolonged inhalation of excessive dust may produce pulmonary disorders.
Aggravation of Pre-existing Conditions:
No information found.

4. First Aid Measures

Inhalation:
Remove to fresh air. Get medical attention for any breathing difficulty.
Ingestion:
Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.
Skin Contact:
Not expected to require first aid measures. Wash exposed area with soap and water. Get medical advice if irritation develops.
Eye Contact:
Wash thoroughly with running water. Get medical advice if irritation develops.

5. Fire Fighting Measures

Fire:
As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source. Activated carbon is difficult to ignite and tends to burn slowly (smolder) without producing smoke or flame. Wet activated carbon depletes oxygen from the air. Materials allowed to smolder for long periods in enclosed spaces, may produce amounts of carbon monoxide which may reach the lower explosive limit for carbon monoxide of 12.5% in air. Contact with strong oxidizers such as ozone or liquid oxygen may cause rapid combustion.
Explosion:
Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Minimum explosible concentration 0.140 g/l.
Fire Extinguishing Media:
Water spray, dry chemical, alcohol foam, or carbon dioxide.
Special Information:
In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container. Warning! Spent product may have absorbed hazardous materials.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Keep away from moisture and oxidizers. Avoid dust dispersal.
Wet activated carbon depletes oxygen from the air and therefore dangerously low levels of oxygen may be encountered in confined spaces. Work procedures for potentially low oxygen areas should be followed.
Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:
- OSHA Permissible Exposure Limits (PELs):
activated carbon (graphite, synthetic): total particulate = 15 mg/m3 (TWA), respirable fraction = 5 mg/m3 (TWA).
- ACGIH Threshold Limit Values (TLVs):
graphite, all forms except graphite fibers: 2 mg/m3 (TWA).

Ventilation System:
A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):
For conditions of use where exposure to the dust or mist is apparent, a half-face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:
Wear protective gloves and clean body-covering clothing.

Eye Protection:
Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance:
Black powder.

Odor:
Odorless.

Solubility:
Insoluble in water.

Specific Gravity:
1.8 - 2.1

pH:
5.0-10.0

% Volatiles by volume @ 21C (70F):
0

Boiling Point:
Sublimes.

Melting Point:
3550C (6422F)

Vapor Density (Air=1):
0.4

Vapor Pressure (mm Hg):
1 @ 3586C (6487F)

Evaporation Rate (BuAc=1):
No information found.

10. Stability and Reactivity

Stability:
Stable under ordinary conditions of use and storage.
Hazardous Decomposition Products:
Involvement in a fire causes formation of carbon dioxide and carbon monoxide.
Hazardous Polymerization:
Will not occur.
Incompatibilities:
Strong oxidizers such as ozone, liquid oxygen, chlorine, permanganate, etc. may result in rapid combustion. Avoid contact with strong acids.
Conditions to Avoid:
Moisture and incompatibles.

11. Toxicological Information

Investigated as a reproductive effector.

```
--------\Cancer Lists\-------------------------------------------------------
                                        ---NTP Carcinogen---
Ingredient                              Known    Anticipated    IARC Category
-------------------------------------   -----    -----------    -------------
Steam Activated Carbon (7440-44-0)       No          No            None
```

12. Ecological Information

Environmental Fate:
No information found.
Environmental Toxicity:
No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Not regulated.

15. Regulatory Information

```
--------\Chemical Inventory Status - Part 1\----------------------------------
Ingredient                                        TSCA  EC   Japan  Australia
-----------------------------------------------   ----  ---  -----  ---------
Steam Activated Carbon (7440-44-0)                 Yes  Yes   No       Yes
```

```
--------\Chemical Inventory Status - Part 2\--------------------------------
                                                        --Canada--
Ingredient                                        Korea  DSL   NDSL  Phil.
----------------------------------------------  -----  ---   ----  -----
Steam Activated Carbon (7440-44-0)                 Yes   Yes   No     Yes

--------\Federal, State & International Regulations - Part 1\----------------
                                            -SARA 302-    ------SARA 313------
Ingredient                                  RQ    TPQ     List  Chemical Catg.
----------------------------------------  ---   -----   ----  --------------
Steam Activated Carbon (7440-44-0)          No    No      No         No

--------\Federal, State & International Regulations - Part 2\----------------
                                                         -RCRA-    -TSCA-
Ingredient                                  CERCLA     261.33     8(d)
----------------------------------------  ------     ------    ------
Steam Activated Carbon (7440-44-0)          No         No         No


Chemical Weapons Convention:  No     TSCA 12(b):  No     CDTA:  No
SARA 311/312:  Acute: Yes      Chronic: No   Fire: No  Pressure: No
Reactivity: No          (Pure / Solid)
```

Australian Hazchem Code: None allocated.
Poison Schedule: None allocated.
WHMIS:
This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings: Health: **0** Flammability: **1** Reactivity: **0**
Label Hazard Warning:
CAUTION! ACTIVATED CARBON AFFECTS THE RESPIRATORY AND CARDIOVASCULAR SYSTEMS.
Label Precautions:
Avoid contact with eyes, skin and clothing.
Avoid breathing dust.
Keep container closed.
Use with adequate ventilation.
Wash thoroughly after handling.
Label First Aid:
If inhaled, remove to fresh air. Get medical attention for any breathing difficulty.
Product Use:
Laboratory Reagent.
Revision Information:
No Changes.

Disclaimer:

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THIS MSDS/SDS IS INTENDED ONLY AS A GUIDE TO THE APPROPRIATE PRECAUTIONARY HANDLING OF THE MATERIAL BY A PROPERLY TRAINED PERSON USING THIS PRODUCT, AND IS NOT INTENDED TO BE COMPREHENSIVE AS TO THE MANNER AND CONDITIONS OF USE, HANDLING, STORAGE, OR DISPOSAL OF THE PRODUCT. INDIVIDUALS RECEIVING THIS MSDS/SDS MUST ALWAYS EXERCISE THEIR OWN INDEPENDENT JUDGMENT IN DETERMINING THE APPROPRIATENESS OF SUCH ISSUES. ACCORDINGLY, AVANTOR PERFORMANCE MATERIALS ASSUMES NO LIABILITY WHATSOEVER FOR THE USE OF OR RELIANCE UPON THIS INFORMATION. NO SUGGESTIONS FOR USE ARE INTENDED AS, AND NOTHING HEREIN SHALL BE CONSTRUED AS, A RECOMMENDATION TO INFRINGE ANY EXISTING PATENTS OR TO VIOLATE ANY FEDERAL, STATE, LOCAL, OR FOREIGN LAWS. AVANTOR PERFORMANCE MATERIALS REMINDS YOU THAT IT IS YOUR LEGAL DUTY TO MAKE ALL INFORMATION IN THIS MSDS/SDS AVAILABLE TO YOUR EMPLOYEES.

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Prepared by: Environmental Health & Safety

Material Safety Data Sheet

SECTION I - Material Identity
SECTION II - Manufacturer's Information
SECTION III - Physical/Chemical Characteristics
SECTION IV - Fire and Explosion Hazard Data
SECTION V - Reactivity Data
SECTION VI - Health Hazard Data
SECTION VII - Precautions for Safe Handling and Use
SECTION VIII - Control Measures
SECTION IX - Label Data
SECTION X - Transportation Data
SECTION XI - Site Specific/Reporting Information
SECTION XII - Ingredients/Identity Information

SECTION I - Material Identity

Item Name	
Part Number/Trade Name	SOLUTION 26 HUMIDIFIER DESCALER (260)
National Stock Number	6850PSOLUTION26
CAGE Code	VISTA
Part Number Indicator	A
MSDS Number	190093
HAZ Code	B

SECTION II - Manufacturer's Information

Manufacturer Name	VISTA SOLUTIONS INC
Street	281 KEYES AVE
City	HAMPSHIRE
State	IL
Country	US
Zip Code	60140
Emergency Phone	800-424-9300 CHEMTREC
Information Phone	800-452-0035

MSDS Preparer's Information

Date MSDS Prepared/Revised	01SEP00
Active Indicator	Y

Alternate Vendors

SECTION III - Physical/Chemical Characteristics

Appearance/Odor	WHITE TO YELLOW CLEAR LIQUID, PUNGENT ODOR
Boiling Point	ND
Melting Point	< 32 F
Vapor Pressure	ND
Vapor Density	ND
Specific Gravity	1
Solubility in Water	COMPLETE
Chemical pH	NR
Container Type	R
Container Pressure Code	1
Temperature Code	4
Product State Code	L

SECTION IV - Fire and Explosion Hazard Data

Flash Point Method	NA
Lower Explosion Limit	NA
Upper Explosion Limit	NA
Extinguishing Media	NOT APPLICABLE - WILL NOT BURN
Special Fire Fighting Procedures	NONE
Unusual Fire/Explosion Hazards	NR

SECTION V - Reactivity Data

Stability	YES
Stability Conditions to Avoid	NONE
Materials to Avoid	NONE
Hazardous Decomposition Products	NR
Hazardous Polymerization	NO
Polymerization Conditions to Avoid	CANNOT OCCUR

SECTION VI - Health Hazard Data

Route of Entry: Skin	YES
Route of Entry: Ingestion	YES
Route of Entry: Inhalation	YES
Health Hazards - Acute and Chronic	SOLUTION IS EXTREMELY IRRITATING TO THE EYES; PROLONGED EYE CONTACT COULD CAUSE SEVERE EYE BURNS. CONTACT THE SKIN CAN CAUSE SKIN BURNS

Carcinogenity: NTP	NO
Carcinogenity: IARC	NO
Carcinogenity: OSHA	NO
Explanation of Carcinogenity	NO REPORTS OF CARCINOGENICITY HAVE BEEN FOUND IN NTP, IARC, OR OSHA LISTINGS
Symptoms of Overexposure	NR
Medical Cond. Aggrevated by Exposure	NONE
Emergency/First Aid Procedures	[EYES] IMMEDIATELY FLUSH WITH WATER FOR AT LEAST 15 MIN. SEEK MED ATTEN [SKIN[WASH OFF WITH SOAP AND WATER, IF BURNS ARE SEVERE, SEEK MED ATTENTION [INGEST] GIVE AT LEAST 4-5 GLASSES OF WATER TO DILUTE, IMMEDIATELY CALL A PHYSICIAN

SECTION VII - Precautions for Safe Handling and Use

Steps if Material Released/Spilled	PROTECT EYES AND SKIN FROM CONTACT WITH MATERIAL DURING CLEANUP. GOGGLES SHOULD BE WORN. PAPER OR PLASTIC JACKET AND PANTS ARE RECOMMENDED. NEUTRALIZE SPILL WITH LIME OR SODA ASH. SWEEP. COLLECT SPILLED PRODUCT ON A SOLID ABSORBENT. SWEEP UP AND PLACE IN AN APPROPRIATE CHEMICAL WASTE CONTAINER. FLUSH SPILL AREA WITH WATER
Neutralizing Agent	NR
Waste Disposal Method	DISPOSE OF UNUSED MATERIAL AND EMPTY CONTAINERS AT AN APPROVED FACILITY IN ACCORDANCE WITH ANY APPLICABLE REGULATION UNDER THE FED RESOURCE CONSERVATION AND RECOVERY ACT, AND STATE AND LOCAL REGULATIONS
Handling and Storage Precautions	AVOID CONTACT WITH EYES AND SKIN. SAFETY GOGGLES ARE RECOMMENDED. REMOVE AND LAUNDER CONTAMINATED CLOTHING. STORE OUT OF THE REACH OF CHILDREN
Other Precautions	NR

SECTION VIII - Control Measures

Respiratory Protection	NR
Ventilation	NR

Protective Gloves	NR
Eye Protection	SAFETY GOGGLES
Other Protective Equipment	NR
Work Hygenic Practices	REMOVE AN LAUNDER CONTAMINATED CLOTHING

SECTION IX - Label Data

Protect Eye	YES
Protect Skin	YES
Protect Respiratory	YES
Chronic Indicator	NO
Contact Code	MODERATE
Fire Code	UNKNOWN
Health Code	UNKNOWN
React Code	UNKNOWN
Specific Hazard and Precaution	NO TARGET ORGANS LISTED FOR CHRONIC EXPOSURES

SECTION X - Transportation Data

SECTION XI - Site Specific/Reporting Information

Volatile Organic Compounds (P/G)	0
Volatile Organic Compounds (G/L)	0

SECTION XII - Ingredients/Identity Information

Ingredient #	01
Ingredient Name	HYDROCHLORIC ACID (<10%)
CAS Number	7647010
Proprietary	NO
Percent	10

BASF
The Chemical Company

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name:	**SONOLASTIC NP1**
Other name:	None allocated
Product code:	Various
Recommended Use:	One-component, Polyurethane-based moisture curing gun grade sealant.

Company:	BASF Construction Chemicals Australia Pty Ltd.
ABN:	46 000 450 288
Address:	11 Stanton Road, Seven Hills, NSW, 2147, Australia
Telephone number:	+61 2 8811 4200
Facsimile:	+61 2 8811 3299

Company:	BASF Construction Chemicals New Zealand Ltd.
Address:	45 William Pickering Drive, Albany, Auckland, New Zealand
Telephone number:	+64 9 414 7233
Facsimile:	+64 9 414 7244

Emergency telephone number: 0417 658 263

2. HAZARDS IDENTIFICATION

Hazard classification:	Hazardous according to criteria of NOHSC
Risk phrase(s):	R 36/37/38 - Irritating to eyes, respiratory system and skin.
Safety phrase(s):	S 7/9 - Keep container tightly closed and in a well ventilated place.
	S 36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.
	S 51 - Use only in well ventilated areas.

3. COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS

Chemical Name	CAS Number	Proportion
Mineral spirits	8052-41-3	< 10%
Calcium oxide	1305-78-8	< 10%
Non-hazardous ingredients		to 100%

4. FIRST AID MEASURES

Ingestion:	Do NOT induce vomiting. Wash mouth with water and seek medical attention.
Eyes:	While holding eyes open, gently flood with plenty of fresh water for 15 minutes. If irritation persists or recurs seek medical attention. Skilled personnel should only undertake removal of contact lenses after an eye injury.

Skin:	Remove contaminated clothing. Flush contacted area thoroughly with soap and plenty of water. If irritation persists, seek medical attention. If irritation persists seek medical attention.
Inhalation:	Remove to fresh air. If breathing is difficult, give oxygen and seek medical attention immediately.
First aid facilities:	Ensure availability of clean water for eye/skin wash.
Advice to doctor:	Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media:	Foam, CO_2 and Dry Chemical.
Hazards from combustion products:	Acrid fumes and oxides of carbon.
Precautions and equipment for fire fighters:	Containers can build up pressure if exposed to heat (fire). Full protective clothing with self-contained breathing apparatus as per personal protection, section 8.

6. ACCIDENTAL RELEASE MEASURES

Methods for clean up / collecting:	Small or major spills should be adsorbed with dry, inert filler (soil or sand) which then can be shovelled into appropriately labelled drums for disposal. Ventilate the area and remove all sources of ignition.
Environmental precautions:	Do not discharge into sewers.

7. HANDLING AND STORAGE

Conditions for safe storage

Location:	Store in a cool, dry and well-ventilated area.
Temperature conditions:	5 to 35°C. Avoid long-term exposure to elevated temperatures.
Protection from weather:	Store undercover and away from moisture, heat and direct sunlight.
Storage incompatibilities:	Avoid contact with oxidising material and water vapour.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure standards:	Not available
Engineering controls:	Ventilation is recommended under normal use conditions. State regulations on speed and direction of airflow away from operators must be observed. Keep containers closed when not in use. Keep out of reach of children.
Respiratory protection:	Type A1 if ventilation is inadequate.
Glove type (AS2161):	Long PVC or nitrile rubber gauntlets
Eye protection:	Chemical worker's goggles.
Clothing:	Overalls.
Other:	Use barrier creams to protect skin from contact with the material. Always wash hands before smoking, eating, drinking or using the toilet and after finishing work. Observe the usual precautions when handling chemicals.

9. PHYSICAL AND CHEMICAL PROPERTIES

MATERIAL SAFETY DATA SHEET

Appearance:	Pigmented paste with mild odour
Boiling point (°C):	155 - 251
Melting point (°C):	Not applicable
Vapour pressure @ 25°(kPa):	Not applicable
Specific gravity:	ca. 1.2
Flash point (°C):	> 49
Flammability limits (%):	UEL – 9.5
	LEL – 0.9
Solubility in water:	Insoluble
Evaporation rate:	Slower than butyl acetate

10. STABILITY AND REACTIVITY

Hazard of use/storage:	Stable under normal storage and application temperature.
Materials to avoid:	Avoid contact with oxidising material and water vapour.
Hazardous decomposition products:	Acrid fumes and oxides of carbon.

11. TOXICOLOGICAL INFORMATION

Acute

Ingestion:	Irritating to mouth, throat and stomach.
Eye:	Causes eye irritation.
Skin:	Causes skin irritation. Allergic reactions are possible. Repeated or prolonged contact with skin may cause sensitisation.
Inhalation:	Harmful if inhaled.

Chronic: Susceptible individuals may develop allergic reactions such as dermatitis on a single significant skin or respiratory exposure or may become sensitised to the material on repeated and prolonged contact. Hence it is imperative that all forms of exposure be kept to an absolute minimum. This product contains solvents. Be warned that intentional misuse by deliberately inhaling contents may be harmful and fatal.

12. ECOLOGICAL INFORMATION

Ecology: Do not discharge into sewers.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

State/Territory authority:	Observe all Federal, State and Local regulations
Dispose – Secure landfill:	Yes.
Dispose – High temp incinerator:	Yes
Precautions for clean up crew:	Full protective clothing as per personal protection, section 8.

14. TRANSPORT INFORMATION

UN number: None allocated

MATERIAL SAFETY DATA SHEET

Dangerous goods class:	None allocated
Subsidiary risk:	None allocated
EPG card:	None allocated
Shipping name:	None allocated
Packing group:	None allocated
Poisons schedule:	None allocated
Hazchem code:	None allocated

15. REGULATORY INFORMATION

Risk phrase(s):	R 36/37/38	- Irritating to eyes, respiratory system and skin.
Safety phrase(s):	S 7/9	- Keep container tightly closed and in a well ventilated place.
	S 36/37/39	- Wear suitable protective clothing, gloves and eye/face protection.
	S 51	- Use only in well ventilated areas.

16. OTHER INFORMATION

Reason for Issue: Change of company name.

This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company. Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request. All information contained in this MSDS is as accurate and up-to-date as possible. No warranty expressed or implied is made as to its accuracy, reliability or completeness.

STEWART HALL CHEMICAL CORP -- SOOTSPRAY, SO3200DA -- 7930-00N070293

========== Product Identification ==========

Product ID:SOOTSPRAY, SO3200DA
MSDS Date:01/27/1994
FSC:7930
NIIN:00N070293
MSDS Number: CBLNB
=== Responsible Party ===
Company Name:STEWART HALL CHEMICAL CORP
Address:222 WASHINGTON ST
City:MT VERNON
State:NY
ZIP:10553
Country:US
Info Phone Num:914-668-6300
Emergency Phone Num:800-424-9300(CHEMTREC)
Preparer's Name:HARVEY GRODJESK
CAGE:GO098
=== Contractor Identification ===
Company Name:STEWART HALL CHEMICAL CORP
Address:222 WASHINGTON ST
City:MT VERNON
State:NY
ZIP:10553-1016
Country:US
Phone:(914)668-6300
CAGE:GO098
Company Name:STEWART-HALL CHEMICAL CORP
Address:222 WASHINGTON ST
Box:City:MT VERNON
State:NY
ZIP:10553
Country:US
Phone:914-668-6300
CAGE:25718

========== Composition/Information on Ingredients ==========

Ingred Name:ETHANOL, 2-BUTOXY-; (GLYCOL BUTYL ETHER) VP:0
CAS:111-76-2
RTECS #:KJ8575000
Fraction by Wt: 2.92%
OSHA PEL:S, 50 PPM
ACGIH TLV:S, 25 PPM

Ingred Name:2-PROPANOL,
1-(2-(2-METHOXY-1-METHYLETHOXY)-1-METHYLETHOXY)-; (GLYCOL ETHER)
VP:0
CAS:20324-33-8
RTECS #:UB7875900
Fraction by Wt: 9.72%
OSHA PEL:N/K
ACGIH TLV:N/K

Ingred Name:ISOPROPYL ALCOHOL (SARA 313) VP:33
CAS:67-63-0
RTECS #:NT8050000

Fraction by Wt: 9.62%
OSHA PEL:400 PPM
ACGIH TLV:400 PPM/500STEL

Ingred Name:NITROGEN OXIDE; (NITROUS OXIDE) VP:60
CAS:10024-97-2
RTECS #:QX1350000
Fraction by Wt: 2.78%
OSHA PEL:N/K
ACGIH TLV:50 PPM

Ingred Name:VOLATILE ORGANIC COMPOUND:0
RTECS #:9999999VO
OSHA PEL:N/K
ACGIH TLV:N/K

Hazards Identification

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.
Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:ACUTE:EYE IRRITANT. INHALATION IRRITANT. CHRONIC:ANIMAL STUDIES CLEARLY DEMONSTRATED DOSE-RELATED ADVERSE EFFECTS ON THE CNS, THE HEMATOPOIETIC TISSUES, THE BLOOD, THE KIDNEYS AND LIVER, ASSOCIATED WI TH THE ADMINISTRATION OF ETHYLENE GLYCOL MONOBUTYL ETHER (EGBE) (EXTRACTED FROM DHHS (NIOSH) (EFTS OF OVEREXP)
Explanation of Carcinogenicity:NOT RELEVANT
Effects of Overexposure:HLTH HAZS:PUBLICATION NO. 90-118) . NONE KNOWN. DELIBERATE INHALATION OF AEROSOL MAY CAUSE RESPIRATORY FAILURE.
Medical Cond Aggravated by Exposure:NONE SPECIFIED BY MANUFACTURER.

First Aid Measures

First Aid:EYES:FLUSH WITH WATER FOR AT LEAST 15 MINUTES. CALL PHYSICIAN. SKIN:WASH WITH SOAP AND WATER FOR 15 MINUTES. IF IRRITATION PERSISTS, CALL PHYSICIAN. INHALATION:REMOVE TO OPEN, VENTILATED AREA. LOOSEN CLOTHING AND KEEP WARM. CALL PHYSICIAN.INGESTION:CALL PHYSICIAN IMMEDIATELY.

Fire Fighting Measures

Flash Point Method:TCC
Flash Point:NONE
Extinguishing Media:MEDIA SUITABLE FOR SURROUNDING FIRE . NOT APPLICABLE.
Fire Fighting Procedures:WEAR NIOSH/MSHA APPROVED SCBA & FULL PROTECTIVE EQUIPMENT . NOT APPLICABLE.
Unusual Fire/Explosion Hazard:CAN MAY BURST IF EXPOSED TO TEMPERATURES ABOVE 120F.

Accidental Release Measures

Spill Release Procedures:VENTILATE AREA WELL. DO NOT BREATHE VAPORS. WASH AWAY WITH WITH SOAP AND WATER.
Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

Handling and Storage

Handling and Storage Precautions:KEEP AWAY FROM HEAT. CONTENTS UNDER

PRESSURE. STORE AT ROOM TEMPERATURES.
Other Precautions:USE ONLY AS DIRECTED WITH ADEQUATE VENTILATION. AVOID BREATHING VAPORS AND PROLONGED SKIN CONTACT. DO NOT PUNCTURE OR INCINERATE CAN. KEEP OUT OF REACH OF CHILDREN.

========== Exposure Controls/Personal Protection ==========

Respiratory Protection:WORK IN VENTILATED AREA. WEAR NIOSH/MSHA APPROVED CHEMICAL MASK.
Ventilation:LOCAL EXHAUST. MECHANICAL.
Protective Gloves:RUBBER OR PLASTIC GLOVES.
Eye Protection:ANSI APPROVED CHEM WORKERS GOGGS .
Other Protective Equipment:ANSI APPROVED EMERGENCY EYE WASH AND DELUGE SHOWER . NONE.
Work Hygienic Practices:NONE SPECIFIED BY MANUFACTURER.
Supplemental Safety and Health
NONE SPECIFIED BY MANUFACTURER.

========== Physical/Chemical Properties ==========

Vapor Pres:SEE INGS
Vapor Density:HVR/AIR
Spec Gravity:1.12005
Evaporation Rate & Reference:FASTER THAN N-BUAC
Appearance and Odor:CLEAR LIQUID, NO ODOR.
Percent Volatiles by Volume:93

========== Stability and Reactivity Data ==========

Stability Indicator/Materials to Avoid:YES
NOT APPLICABLE.
Stability Condition to Avoid:AVOID HEATING CONTAINER.
Hazardous Decomposition Products:CARBON DIOXIDE.

========== Disposal Considerations ==========

Waste Disposal Methods:DISPOSAL MUST BE I/A/W FEDERAL, STATE & LOCAL REGULATIONS . DO NOT PUNCTURE CAN. DO NOT INCINERATE.

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Material Safety Data Sheet **U.S. Department of Labor**
May be used to comply with Occupational Safety and
OSHA's Hazard Communication Standard. Health Administration
29CFR 1910.1200. Standard must be consulted for specific requirements.

PRODUCT NUMBER:DSS1 - 35
PRODUCT NUMBER:DSS37-58

Section I

Manufacturer's Name:	DecoArt, Inc.
Address:	US Hwys 150 & 27, Stanford, KY 40484
Emergency Telephone:	CHEMTREC: (800) 424-9300
	DecoArt: (606) 365-3193
Date Prepared:	March 5,2001
Chemical Name:	Mixture
Trade Name:	So-Soft Fabric Paint
Product Family:	Fabric Paint
Label Certification:	AP

Section II - Hazardous Ingredients/Identity Information

Hazardous Components, Specific Chemical Identity; Common Names(s)
OSHA PEL ACGIH TLV Other Limits %(Optional)

This product contains no materials in sufficient quantities to be toxic or injurious to humans or to cause acute or chronic health problems.

Section III - Physical/Chemical Characteristics

Boiling Point Range:	212 F
Vapor Pressure (mm Hg.):	NA
Vapor Density (AIR=1):	NA
Specific Gravity (H20=1):	1.15
Percent Volatile by volume (%):	45 - 55%
Evaporation Rate (Butyl Acetate=1):	NA
Solubility in Water:	Soluble
Appearance and Odor:	Liquid, Characteristic odor

Product # DSS1 - 35
Product# DSS37-58

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used):	Greater than 212 F
Flammable Limits:	NA
LEL:	NA
UEL:	NA
Extinguishing Media:	Water spray, dry chemical, foam, CO_2
Special Fire Fighting Procedures:	Water or foam may cause frothing if directed into containers or burning liquid. Fire fighters should wear protective clothing. Use water spray to keep fire exposed containers cool.
Unusual Fire and Explosion Hazards:	Burning plastic containers may emit hazardous fumes.

Section V - Reactivity Data

Stability:	Stable
Conditions to Avoid:	Keep from freezing
Incompatibility (Materials to Avoid):	Avoid contact with strong oxidizing agents

Hazardous Decomposition by Byproducts: Usual products of combustion: CO_2, CO and possibly acrolein

Hazardous Polymerization:	Will not occur

Product #DSS1 - 35
Product #DSS37-58

Section VI - Health Hazard Data

Route(s):	Inhalation: No; Skin: Yes; Ingestion: Yes
Health Hazards (Acute and Chronic):	None expected for product
Signs and Symptoms of Exposure:	EYES: May exhibit redness and primary irritation. SKIN: Some irritation may occur.
Emergency and First Aid Procedures:	EYES: Flush with clean water for 15 minutes. SKIN: Wash with soap and water

Section VII - Precautions for Safe Handling and Use

Steps To Be Taken in Case Material Released or Spilled:	Small spills may be picked up with absorbent material and transferred to containers. Scoop up large spills for salvage or landfilling.
Waste Disposal Method:	Carefully incinerate or use secure landfill in accordance with local, state and federal regulations.
Precautions to Be Taken in Handling and Storing:	Store away from high temperatures and flames.
Other Precautions:	None.

Section VIII - Control Measures

Respiratory Protection (Specify Type):	None generally required
Ventilation:	Local exhaust recommended
Special:	NA
Other:	NA
Protective Gloves:	None required
Eye Protection:	Goggles recommended
Other Protective Clothing or Equipment:	Eye wash station should be available

Safety Data Sheet
Spartan Chemical Company, Inc.

Revision Date: 05-Aug-2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name: **SPARCREME**
Product Number: 7320 , 7101
Recommended Use: Cleaning agent
Uses Advised Against: For Industrial and Institutional Use Only

Manufacturer/Supplier: Spartan Chemical Company, Inc.
1110 Spartan Drive
Maumee, Ohio 43537 USA
800-537-8990 (Business hours)
www.spartanchemical.com

24 Hour Emergency Phone Numbers:
Medical Emergency/Information: 888-314-6171
Transportation/Spill/Leak: CHEMTREC 800-424-9300

2. HAZARDS IDENTIFICATION

GHS Classification

Acute Toxicity - Oral:	Category 4
Skin Corrosion/Irritation:	Category 2
Serious Eye Damage/Eye Irritation:	Category 2A
Carcinogenicity:	Category 1A

GHS Label Elements

Signal Word: **Danger**

Symbols:

Hazard Statements:
Harmful if swallowed.
Causes skin irritation.
Causes serious eye irritation
May cause cancer

Precautionary Statements:

Prevention:
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash hands and any exposed skin thoroughly after handling.
Do not eat, drink or smoke when using this product

Response: **If exposed or concerned: Get medical attention.**

-Eyes IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

-Skin IF ON SKIN (or hair): Wash with plenty of soap and water. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash before reuse.

-Ingestion: IF SWALLOWED: Call a poison center or physician if you feel unwell. Rinse mouth.

-Specific Treatment: See Safety Data Sheet Section 4: "FIRST AID MEASURES" for additional information.

Storage: Store locked up.
Disposal: Dispose of contents and container in accordance with local, state and federal regulations.

Hazards Not Otherwise Classified: Not Applicable

Other Information:
• Contains respirable crystalline quartz which may cause cancer if inhaled.
• Keep out of reach of children.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
water	7732-18-5	40-70
quartz	14808-60-7	10-30
citric acid	77-92-9	1-5
alkyl(C10-16)benzenesulfonic acid	68584-22-5	1-5
xanthan gum	11138-66-2	1-5
triethanolamine	102-71-6	0.1-1

Specific chemical identity and/or exact percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

-Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
-Skin Contact: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation occurs: Get medical attention.
-Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison control center or physician if you feel unwell.
-Ingestion: Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a poison center or physician if you feel unwell.
Note to Physicians: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Product does not support combustion, Use extinguishing agent suitable for type of surrounding fire
Specific Hazards Arising from the Chemical: Dried product is capable of burning. Combustion products are toxic.
Hazardous Combustion Products: May include Carbon monoxide Carbon dioxide and other toxic gases or vapors.

Protective Equipment and Precautions for Firefighters: Wear MSHA/NIOSH approved self-contained breathing apparatus (SCBA) and full protective gear. Cool fire-exposed containers with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.
Environmental Precautions: Do not rinse spill onto the ground, into storm sewers or bodies of water.
Methods for Clean-Up: Prevent further leakage or spillage if safe to do so. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

7. HANDLING AND STORAGE

Advice on Safe Handling: Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

Storage Conditions: Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep from freezing.

Incompatible Materials: Sodium hypochlorite (or other hypochlorites).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits: .

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH
quartz 14808-60-7	TWA: 0.025 mg/m³ respirable fraction	(vacated) TWA: 0.1 mg/m³ respirable dust : (30)/(%SiO2 + 2) mg/m³ TWA total dust : (250)/(%SiO2 + 5) mppcf TWA respirable fraction : (10)/(%SiO2 + 2) mg/m³ TWA respirable fraction	IDLH: 50 mg/m³ respirable dust TWA: 0.05 mg/m³ respirable dust

Engineering Controls: Provide good general ventilation.
If work practices generate dust, fumes, gas, vapors or mists which expose workers to chemicals above the occupational exposure limits, local exhaust ventilation or other engineering controls should be considered.

Personal Protective Equipment

Eye/Face Protection: Wear splash goggles.

Skin and Body Protection: Wear rubber or other chemical-resistant gloves.

Respiratory Protection: Not required with expected use.
If occupational exposure limits are exceeded or respiratory irritation occurs, use of a NIOSH/MSHA approved respirator suitable for the use-conditions and chemicals in Section 3 should be considered.

General Hygiene Considerations: Wash hands and any exposed skin thoroughly after handling.
See 29 CFR 1910.132-138 for further guidance.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Physical State:	Paste/Gel Liquid
Color:	Light green
Odor:	Pleasant
pH:	2.0-2.5
Melting Point / Freezing Point:	No information available.
Boiling Point / Boiling Range:	100 °C / 212 °F
Flash Point:	> 100 °C / > 212 °F
Evaporation Rate:	< 1 (Butyl acetate = 1)
Flammability (solid, gas)	No information available.
Upper Flammability Limit:	No information available.
Lower Flammability Limit:	No information available.
Vapor Pressure:	No information available.
Vapor Density:	No information available.
Specific Gravity:	1.185
Solubility(ies):	Partially soluble
Partition Coefficient:	No information available.
Autoignition Temperature:	No information available.
Decomposition Temperature:	No information available.
Viscosity:	No information available.

10. STABILITY AND REACTIVITY

Reactivity: This material is considered to be non-reactive under normal conditions of use.

Chemical Stability: Stable under normal conditions.

Possibility of Hazardous Reactions: Not expected to occur with normal handling and storage.

Conditions to Avoid: Extremes of temperature and direct sunlight.

Incompatible Materials: Sodium hypochlorite (or other hypochlorites).

Hazardous Decomposition Products: May include carbon monoxide, carbon dioxide (CO2) and other toxic gases or vapors.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Eyes, Skin, Ingestion, Inhalation.
Symptoms of Exposure:
-Eye Contact: Pain, redness, swelling of the conjunctiva and blurred vision.
-Skin Contact: Pain, redness and cracking of the skin.
-Inhalation: Nasal discomfort and coughing.
-Ingestion: Pain, nausea, vomiting and diarrhea.
Immediate, Delayed, Chronic Effects
Product Information: Contains respirable crystalline quartz which may cause cancer if inhaled.

Target Organ Effects: -Eyes. Lungs. Respiratory System.
Numerical Measures of Toxicity
The following acute toxicity estimates (ATE) are calculated based on the GHS document.
.
ATEmix (oral): 1835 mg/kg
ATEmix (dermal): 57237 mg/kg

Component Acute Toxicity Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
water 7732-18-5	> 90 mL/kg (Rat)	Not Available	Not Available
quartz 14808-60-7	= 500 mg/kg (Rat)	Not Available	Not Available
citric acid 77-92-9	= 3000 mg/kg (Rat)	Not Available	Not Available
alkyl(C10-16)benzenesulfonic acid 68584-22-5	= 530 mg/kg (Rat)	= 530 mg/kg (Rat)	Not Available

Carcinogenicity: The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
quartz 14808-60-7	A2	Group 1	Known	Listed

ACGIH (American Conference of Governmental Industrial Hygienists): A2 - Suspected Human Carcinogen
IARC (International Agency for Research on Cancer): Group 1 - Carcinogenic to Humans
NTP (National Toxicology Program): Known - Known Carcinogen

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/Aquatic Plants	Fish	Toxicity to Microorganisms	Crustacea
citric acid 77-92-9	Not Available	1516: 96 h Lepomis macrochirus mg/L LC50 static	Not Available	120: 72 h Daphnia magna mg/L EC50
alkyl(C10-16)benzenesulfonic acid 68584-22-5	Not Available	3: 96 h Oncorhynchus mykiss mg/L LC50 static	Not Available	2.9: 48 h Daphnia magna mg/L EC50

Persistence and Degradability: No information available.
Bioaccumulation: No information available.

Other Adverse Effects: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal of Wastes: Dispose of in accordance with federal, state and local regulations.
Contaminated Packaging: Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT: Not Regulated
Proper Shipping Name: Non Hazardous Product
Special Provisions: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Check with a trained hazardous materials transportation expert for information specific to your situation.

IMDG: Not Regulated
Proper Shipping Name: Non Hazardous Product

15. REGULATORY INFORMATION

TSCA Status: (Toxic Substance Control Act Section 8(b) Inventory)
All chemical substances in this product are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

SARA 313
This product does not contain listed substances above the "de minimus" level

SARA 311/312 Hazard Categories

Acute Health Hazard:	Yes
Chronic Health Hazard:	Yes
Fire Hazard:	No
Sudden release of pressure hazard:	No
Reactive Hazard:	No

California Proposition 65
This product is not subject to warning requirements under California Proposition 65.

16. OTHER INFORMATION

NFPA	**Health Hazards:** 2	**Flammability:** 0	**Instability:** 0	**Special:** N/A
HMIS	**Health Hazards:** 2*	**Flammability:** 0	**Physical Hazards:** 0	

Revision Date: 05-Aug-2015
Reasons for Revision: Section 14 and 15

Disclaimer:
The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT IDENTIFICATION AND USE

PRODUCT IDENTIFIER : SPECTRUM LEAD FREE 904 INDIAN SUMMER	PRODUCT IDENTIFICATION NUMBER 904

PRODUCT USE : CERAMIC GLAZE

MANUFACTURER'S NAME SPECTRUM GLAZES INC.	SUPPLIER'S NAME SPECTRUM GLAZES INC.
STREET ADDRESS 40 HANLAN RD UNIT 33	STREET ADDRESS 40 HANLAN RD UNIT 33
CITY WOODBRIDGE PROVINCE ONTARIO	CITY WOODBRIDGE PROVINCE ONTARIO
POSTAL CODE L4L 3P6 EMERGENCY TEL.NO.(905)851-8310	POSTAL CODE L4L 3P6 EMERGENCY TEL.NO.(905)851-8310

SECTION 2 - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	%	CAS NUMBER	LD50 OF INGREDIENTS (SPECIFY SPECIES AND ROUTE)	LC50 OF INGREDIENT (SPECIFY SPECIES)
SiO2	25-33	14808-60-7	ILV 15mg/m3 OSHA/TWA	
CaO	5-10			
Na2O	2-5	1305-78-8		
Al2O3	3-7	1344-28-1		
B2O3	4-8	10043-35-3		
ZrO2	3-5	7440-67-2		
Fe2O3	1-2	1309-37-1		

SECTION 3 - PHYSICAL DATA

PHYSICAL STATE LIQUID	ODOUR AND APPEARANCE ODOURLESS LIQUID			ODOUR THRESHOLD(PPM) N.A.
VAPOUR PRESSURE (mm Hg) N.A.	VAPOUR DENSITY (AIR=1)	EVAPORATION RATE N.A.	BOILING POINT(C) N.A.	FREEZING POINT(C) N.A.
pH 6.5-7	SPECIFIC GRAVITY 1.6-2.0	COEFF. WATER/OIL DIST. N.A.		

SECTION 4 - FIRE AND EXPLOSION DATA

FLAMMABILITY YES__ NO X FLAMES UNDER WHICH CONDITIONS : THIS PRODUCT DOES NOT SUPPORT COMBUSTION

MEANS OF EXTINCTION NO SPECIAL MEANS REQUIRED

FLASHPOINT AND METHOD NONE	UPPER FLAMMABLE LIMIT (% BY VOLUME) N.A.	LOWER FLAMMABLE LIMIT (% BY VOLUME) N.A.
AUTOIGNITION TEMP.(C) N.A.	HAZARDOUS COMBUSTION PRODUCTS NONE	
EXPLOSION DATA N.A. SENSITIVITY IMPACT N.A.	ACTIVITY TO STATIC DISCHARGE N.A.	

SECTION 5 - REACTIVITY DATA

CHEMICAL STABILITY
YES X NO__ IF NO, UNDER WHICH CONDITIONS

INCOMPATIBILITY WITH OTHER SUBSTANCES
YES__ NO X IF SO WHICH ONESREACTIVITY

REACTIVITY AND UNDER WHAT CONDITIONS: NO REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCT: MATERIAL IS STABLE, NO POLYMERIZATION BUT TOXIC FUMES MAY BE RELEASED WHEN MATERIAL IS MELTED.

PRODUCT IDENTIFIER SPECTRUM LEAD FREE 904 INDIAN SUMMER

SECTION 6 – TOXICOLOGICAL PROPERTIES

ROUTE OF ENTRY
SKIN CONTACT SKIN ABSORPTION X EYE CONTACT X INHALATION INGESTION X

EFFECTS OF ACUTE EXPOSURE TO PRODUCT: SKIN IRRITATION DUE TO ABRASIVENESS.
EYE EXPOSURE COULD CAUSE IRRITATION BUT NO TOXIC EFFECTS.

EFFECTS OF CHRONIC EXPOSURE TO PRODUCT: METAL FUMES IN THE VAPOURS FROM FIRING CERAMIC GLAZES MAY CAUSE LUNG INFLAMATION AND DAMAGE TO KIDNEY AND NERVOUS SYSTEM.

EXPOSURE LIMITS	IRRITANCY OF PRODUCT	SENSITIZATION TO PRODUCT	CARCINOGENICITY
TERATOGENCITY	REPRODUCTIVE TOXICITY	MUTAGENICITY	SYNERGISTIC PRODUCTS

SECTION 7 – PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT:

GLOVES (SPECIFY) WORK GLOVES	RESPIRATOR (SPECIFY) APPROVED DUST MASK	EYE (SPECIFY) SAFETY GLASSES
FOOTWEAR (SPECIFY)	CLOTHING (SPECIFY)	OTHER (SPECIFY)

ENGINEERING CONTROLS (SPECIFY,EG. VENTILATION, ENCLOSED PROCESS)
VENTILATION SHOULD BE USED WHEN SPRAYING GLAZES.

LEAK AND SPILL PROCEDURE: SCOOP INTO SUITABLE RECEPTACLE. DO NOT WASH DOWN DRAIN.

WASTE DISPOSAL: SEND TO APPROVED SITE IN ACCORDANCE WITH REGULATIONS.

HANDLING PROCEDURES AND EQUIPMENT: NO SPECIAL EQUIPEMENT NEEDED. FOLLOW STANDARD PLANT HYGIENE PROCEDURE.

STORAGE REQUIREMENTS: STORE IN DRY AREAS.

SPECIAL SHIPPING INFORMATION: PROTECT AGAINST PHYSICAL DAMAGE. **DOT** LABEL NON-REGULATED

SECTION 8 – FIRST AID MEASURES

SPECIFIC MEASURES: GLAZE CONTAINS THE OXIDES LISTED IN THE CHEMICAL FORMULA IN FORM OF CERAMIC FRIT. SOME OF THESE OXIDES ARE ON THE INGREDIENT DISCLOSURE LIST, ONCE THESE OXIDES ARE FUSED AND CONVERTED INTO FRIT THEY ARE NO LONGER AVAILABLE IN TOXIC FORM EVEN THOUGH TESTING WOULD DETECT THE PRESENCE OF THESE OXIDES. (FRIT IS ESSENTIALLY AN INSOLUBLE SUBSTANCE). THE OXIDES ARE PRESENT IN THE FORM OF A SINTERED CERAMIC STAIN OF LOW SOLUBILITY. tHESE INGREDIENTS ARE PRESENT IN A STABLE AQUEOUS SUSPENSION.

SECTION 9 – PREPARATION DATE OF MSDS

PREPARED BY (GROUP,DEPARTMENT,ETC.) TECHNICAL DEPT.	PHONE NUMBER: (905) 851-8310	DATE August 11, 2005

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT IDENTIFICATION AND USE

PRODUCT IDENTIFIER : SPECTRUM LEAD FREE 905 WHEATFIELD	PRODUCT IDENTIFICATION NUMBER 905
PRODUCT USE : CERAMIC GLAZE	
MANUFACTURER'S NAME SPECTRUM GLAZES INC.	SUPPLIER'S NAME SPECTRUM GLAZES INC.
STREET ADDRESS 40 HANLAN RD UNIT 33	STREET ADDRESS 40 HANLAN RD UNIT 33
CITY WOODBRIDGE PROVINCE ONTARIO	CITY WOODBRIDGE PROVINCE ONTARIO
POSTAL CODE L4L 3P6 EMERGENCY TEL.NO.(905)851-8310	POSTAL CODE L4L 3P6 EMERGENCY TEL.NO.(905)851-8310

SECTION 2 - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	%	CAS NUMBER	LD50 OF INGREDIENTS (SPECIFY SPECIES AND ROUTE)	LC50 OF INGREDIENT (SPECIFY SPECIES)
SiO2	25-33	14808-60-7	ILV 15mg/m3 OSHA/TWA	
CaO	5-10			
Na2O	2-5	1305-78-8		
Al2O3	3-7	1344-28-1		
B2O3	4-8	10043-35-3		
MgO	1-2			
Fe2O3	1-2	1309-37-1		
ZnO	7-9	1314-13-2		

SECTION 3 - PHYSICAL DATA

PHYSICAL STATE LIQUID	ODOUR AND APPEARANCE ODOURLESS LIQUID			ODOUR THRESHOLD(PPM) N.A.
VAPOUR PRESSURE (mm Hg) N.A.	VAPOUR DENSITY (AIR=1)	EVAPORATION RATE N.A.	BOILING POINT(C) N.A.	FREEZING POINT(C) N.A.
pH 6.5-7	SPECIFIC GRAVITY 1.6-2.0	COEFF. WATER/OIL DIST. N.A.		

SECTION 4 - FIRE AND EXPLOSION DATA

FLAMMABILITY YES__ NO X FLAMES UNDER WHICH CONDITIONS : THIS PRODUCT DOES NOT SUPPORT COMBUSTION

MEANS OF EXTINCTION NO SPECIAL MEANS REQUIRED

FLASHPOINT AND METHOD NONE	UPPER FLAMMABLE LIMIT (% BY VOLUME) N.A.	LOWER FLAMMABLE LIMIT (% BY VOLUME) N.A.
AUTOIGNITION TEMP.(C) N.A.	HAZARDOUS COMBUSTION PRODUCTS NONE	
EXPLOSION DATA N.A. SENSITIVITY IMPACT N.A.	ACTIVITY TO STATIC DISCHARGE N.A.	

SECTION 5 - REACTIVITY DATA

CHEMICAL STABILITY
YES X NO__ IF NO, UNDER WHICH CONDITIONS

INCOMPATIBILITY WITH OTHER SUBSTANCES
YES__ NO X IF SO WHICH ONESREACTIVITY

REACTIVITY AND UNDER WHAT CONDITIONS: NO REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCT: MATERIAL IS STABLE, NO POLYMERIZATION BUT TOXIC FUMES MAY BE RELEASED WHEN MATERIAL IS MELTED.

PRODUCT IDENTIFIER SPECTRUM LEAD FREE 905 WHEATFIELD

SECTION 6 – TOXICOLOGICAL PROPERTIES

ROUTE OF ENTRY
SKIN CONTACT SKIN ABSORPTION X EYE CONTACT X INHALATION INGESTION X

EFFECTS OF ACUTE EXPOSURE TO PRODUCT: SKIN IRRITATION DUE TO ABRASIVENESS.
EYE EXPOSURE COULD CAUSE IRRITATION BUT NO TOXIC EFFECTS.

EFFECTS OF CHRONIC EXPOSURE TO PRODUCT: METAL FUMES IN THE VAPOURS FROM FIRING CERAMIC GLAZES MAY CAUSE LUNG INFLAMATION AND DAMAGE TO KIDNEY AND NERVOUS SYSTEM.

EXPOSURE LIMITS	IRRITANCY OF PRODUCT	SENSITIZATION TO PRODUCT	CARCINOGENICITY
TERATOGENCITY	REPRODUCTIVE TOXICITY	MUTAGENICITY	SYNERGISTIC PRODUCTS

SECTION 7 – PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT:

GLOVES (SPECIFY) WORK GLOVES	RESPIRATOR (SPECIFY) APPROVED DUST MASK	EYE (SPECIFY) SAFETY GLASSES
FOOTWEAR (SPECIFY)	CLOTHING (SPECIFY)	OTHER (SPECIFY)

ENGINEERING CONTROLS (SPECIFY,EG. VENTILATION, ENCLOSED PROCESS)
VENTILATION SHOULD BE USED WHEN SPRAYING GLAZES.

LEAK AND SPILL PROCEDURE: SCOOP INTO SUITABLE RECEPTACLE. DO NOT WASH DOWN DRAIN.

WASTE DISPOSAL: SEND TO APPROVED SITE IN ACCORDANCE WITH REGULATIONS.

HANDLING PROCEDURES AND EQUIPMENT: NO SPECIAL EQUIPEMENT NEEDED. FOLLOW STANDARD PLANT HYGIENE PROCEDURE.

STORAGE REQUIREMENTS: STORE IN DRY AREAS.

SPECIAL SHIPPING INFORMATION: PROTECT AGAINST PHYSICAL DAMAGE. **DOT** LABEL NON-REGULATED

SECTION 8 – FIRST AID MEASURES

SPECIFIC MEASURES: GLAZE CONTAINS THE OXIDES LISTED IN THE CHEMICAL FORMULA IN FORM OF CERAMIC FRIT. SOME OF THESE OXIDES ARE ON THE INGREDIENT DISCLOSURE LIST, ONCE THESE OXIDES ARE FUSED AND CONVERTED INTO FRIT THEY ARE NO LONGER AVAILABLE IN TOXIC FORM EVEN THOUGH TESTING WOULD DETECT THE PRESENCE OF THESE OXIDES. (FRIT IS ESSENTIALLY AN INSOLUBLE SUBSTANCE). THE OXIDES ARE PRESENT IN THE FORM OF A SINTERED CERAMIC STAIN OF LOW SOLUBILITY. tHESE INGREDIENTS ARE PRESENT IN A STABLE AQUEOUS SUSPENSION.

SECTION 9 – PREPARATION DATE OF MSDS

PREPARED BY (GROUP,DEPARTMENT,ETC.) TECHNICAL DEPT.	PHONE NUMBER: (905) 851-8310	DATE August 11, 2005

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT IDENTIFICATION AND USE

PRODUCT IDENTIFIER : SPECTRUM LEAD FREE 906 BURNT SUGAR	PRODUCT IDENTIFICATION NUMBER 906
PRODUCT USE : CERAMIC GLAZE	
MANUFACTURER'S NAME SPECTRUM GLAZES INC.	SUPPLIER'S NAME SPECTRUM GLAZES INC.
STREET ADDRESS 40 HANLAN RD UNIT 33	STREET ADDRESS 40 HANLAN RD UNIT 33
CITY WOODBRIDGE PROVINCE ONTARIO	CITY WOODBRIDGE PROVINCE ONTARIO
POSTAL CODE L4L 3P6 EMERGENCY TEL.NO.(905)851-8310	POSTAL CODE L4L 3P6 EMERGENCY TEL.NO.(905)851-8310

SECTION 2 - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	%	CAS NUMBER	LD50 OF INGREDIENTS (SPECIFY SPECIES AND ROUTE)	LC50 OF INGREDIENT (SPECIFY SPECIES)
SiO2	25-33	14808-60-7	ILV 15mg/m3 OSHA/TWA	
CaO	5-10			
Na2O	5-8	1305-78-8		
Al2O3	3-7	1344-28-1		
B2O3	4-8	10043-35-3		
MgO	1-2			
Fe2O3	4-7	1309-37-1		
ZnO	10-13	1314-13-2		
ZrO2	3-6	7440-67-2		

SECTION 3 - PHYSICAL DATA

PHYSICAL STATE LIQUID	ODOUR AND APPEARANCE ODOURLESS LIQUID			ODOUR THRESHOLD(PPM) N.A.
VAPOUR PRESSURE (mm Hg) N.A.	VAPOUR DENSITY (AIR=1)	EVAPORATION RATE N.A.	BOILING POINT(C) N.A.	FREEZING POINT(C) N.A.
pH 6.5-7	SPECIFIC GRAVITY 1.6-2.0	COEFF. WATER/OIL DIST. N.A.		

SECTION 4 - FIRE AND EXPLOSION DATA

FLAMMABILITY YES__ NO X FLAMES UNDER WHICH CONDITIONS : THIS PRODUCT DOES NOT SUPPORT COMBUSTION

MEANS OF EXTINCTION NO SPECIAL MEANS REQUIRED

FLASHPOINT AND METHOD NONE	UPPER FLAMMABLE LIMIT (% BY VOLUME) N.A.	LOWER FLAMMABLE LIMIT (% BY VOLUME) N.A.
AUTOIGNITION TEMP.(C) N.A.	HAZARDOUS COMBUSTION PRODUCTS NONE	
EXPLOSION DATA N.A. SENSITIVITY IMPACT N.A.	ACTIVITY TO STATIC DISCHARGE N.A.	

SECTION 5 - REACTIVITY DATA

CHEMICAL STABILITY
YES X NO__ IF NO, UNDER WHICH CONDITIONS

INCOMPATIBILITY WITH OTHER SUBSTANCES
YES__ NO X IF SO WHICH ONESREACTIVITY

REACTIVITY AND UNDER WHAT CONDITIONS: NO REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCT: MATERIAL IS STABLE, NO POLYMERIZATION BUT TOXIC FUMES MAY BE RELEASED WHEN MATERIAL IS MELTED.

PRODUCT IDENTIFIER SPECTRUM LEAD FREE 906 BURNT SUGAR

SECTION 6 – TOXICOLOGICAL PROPERTIES

ROUTE OF ENTRY
SKIN CONTACT SKIN ABSORPTION X EYE CONTACT X INHALATION INGESTION X

EFFECTS OF ACUTE EXPOSURE TO PRODUCT: SKIN IRRITATION DUE TO ABRASIVENESS.
EYE EXPOSURE COULD CAUSE IRRITATION BUT NO TOXIC EFFECTS.

EFFECTS OF CHRONIC EXPOSURE TO PRODUCT: METAL FUMES IN THE VAPOURS FROM FIRING CERAMIC GLAZES MAY CAUSE LUNG INFLAMATION AND DAMAGE TO KIDNEY AND NERVOUS SYSTEM.

EXPOSURE LIMITS	IRRITANCY OF PRODUCT	SENSITIZATION TO PRODUCT	CARCINOGENICITY
TERATOGENCITY	REPRODUCTIVE TOXICITY	MUTAGENICITY	SYNERGISTIC PRODUCTS

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FOOTWEAR (SPECIFY)	CLOTHING (SPECIFY)	OTHER (SPECIFY)

ENGINEERING CONTROLS (SPECIFY,EG. VENTILATION, ENCLOSED PROCESS)
VENTILATION SHOULD BE USED WHEN SPRAYING GLAZES.

LEAK AND SPILL PROCEDURE: SCOOP INTO SUITABLE RECEPTACLE. DO NOT WASH DOWN DRAIN.

WASTE DISPOSAL: SEND TO APPROVED SITE IN ACCORDANCE WITH REGULATIONS.

HANDLING PROCEDURES AND EQUIPMENT: NO SPECIAL EQUIPEMENT NEEDED. FOLLOW STANDARD PLANT HYGIENE PROCEDURE.

STORAGE REQUIREMENTS: STORE IN DRY AREAS.

SPECIAL SHIPPING INFORMATION: PROTECT AGAINST PHYSICAL DAMAGE. **DOT** LABEL NON-REGULATED

SECTION 8 – FIRST AID MEASURES

SPECIFIC MEASURES: GLAZE CONTAINS THE OXIDES LISTED IN THE CHEMICAL FORMULA IN FORM OF CERAMIC FRIT. SOME OF THESE OXIDES ARE ON THE INGREDIENT DISCLOSURE LIST, ONCE THESE OXIDES ARE FUSED AND CONVERTED INTO FRIT THEY ARE NO LONGER AVAILABLE IN TOXIC FORM EVEN THOUGH TESTING WOULD DETECT THE PRESENCE OF THESE OXIDES. (FRIT IS ESSENTIALLY AN INSOLUBLE SUBSTANCE). THE OXIDES ARE PRESENT IN THE FORM OF A SINTERED CERAMIC STAIN OF LOW SOLUBILITY. tHESE INGREDIENTS ARE PRESENT IN A STABLE AQUEOUS SUSPENSION.

SECTION 9 – PREPARATION DATE OF MSDS

PREPARED BY (GROUP,DEPARTMENT,ETC.) TECHNICAL DEPT.	PHONE NUMBER: (905) 851-8310	DATE May 11, 2017

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT IDENTIFICATION AND USE

PRODUCT IDENTIFIER : SPECTRUM LEAD FREE 917 TERRA COTTA	PRODUCT IDENTIFICATION NUMBER 917
PRODUCT USE : CERAMIC GLAZE	
MANUFACTURER'S NAME SPECTRUM GLAZES INC.	SUPPLIER'S NAME SPECTRUM GLAZES INC.
STREET ADDRESS 40 HANLAN RD UNIT 33	STREET ADDRESS 40 HANLAN RD UNIT 33
CITY WOODBRIDGE PROVINCE ONTARIO	CITY WOODBRIDGE PROVINCE ONTARIO
POSTAL CODE L4L 3P6 EMERGENCY TEL.NO.(905)851-8310	POSTAL CODE L4L 3P6 EMERGENCY TEL.NO.(905)851-8310

SECTION 2 - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	%	CAS NUMBER	LD50 OF INGREDIENTS (SPECIFY SPECIES AND ROUTE)	LC50 OF INGREDIENT (SPECIFY SPECIES)
SiO2	25-33	14808-60-7	ILV 15mg/m3 OSHA/TWA	
CaO	5-10			
Na2O	2-5	1305-78-8		
Al2O3	3-7	1344-28-1		
B2O3	4-8	10043-35-3		
ZrO2	4-7	744-67-2		
Fe2O3	1-2	1309-37-1		
CaO	.5-1.5	1305-78-8		
MgO	10-15			
Al2O3	6-10	1344-28-1		
SiO2	28-35	14808-60-7		

SECTION 3 - PHYSICAL DATA

PHYSICAL STATE LIQUID	ODOUR AND APPEARANCE ODOURLESS LIQUID			ODOUR THRESHOLD(PPM) N.A.
VAPOUR PRESSURE (mm Hg) N.A.	VAPOUR DENSITY (AIR=1)	EVAPORATION RATE N.A.	BOILING POINT(C) N.A.	FREEZING POINT(C) N.A.
pH 6.5-7	SPECIFIC GRAVITY 1.6-2.0	COEFF. WATER/OIL DIST. N.A.		

SECTION 4 - FIRE AND EXPLOSION DATA

FLAMMABILITY YES__ NO X FLAMES UNDER WHICH CONDITIONS : THIS PRODUCT DOES NOT SUPPORT COMBUSTION

MEANS OF EXTINCTION NO SPECIAL MEANS REQUIRED

FLASHPOINT AND METHOD NONE	UPPER FLAMMABLE LIMIT (% BY VOLUME) N.A.	LOWER FLAMMABLE LIMIT (% BY VOLUME) N.A.
AUTOIGNITION TEMP.(C) N.A.	HAZARDOUS COMBUSTION PRODUCTS NONE	
EXPLOSION DATA N.A. SENSITIVITY IMPACT N.A.	ACTIVITY TO STATIC DISCHARGE N.A.	

SECTION 5 - REACTIVITY DATA

CHEMICAL STABILITY
YES X NO__ IF NO, UNDER WHICH CONDITIONS

INCOMPATIBILITY WITH OTHER SUBSTANCES
YES__ NO X IF SO WHICH ONESREACTIVITY

REACTIVITY AND UNDER WHAT CONDITIONS: NO REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCT: MATERIAL IS STABLE, NO POLYMERIZATION BUT TOXIC FUMES MAY BE RELEASED WHEN MATERIAL IS MELTED.

PRODUCT IDENTIFIER SPECTRUM LEAD FREE 917 TERRA COTTA

SECTION 6 – TOXICOLOGICAL PROPERTIES

ROUTE OF ENTRY
SKIN CONTACT SKIN ABSORPTION X EYE CONTACT X INHALATION INGESTION X

EFFECTS OF ACUTE EXPOSURE TO PRODUCT: SKIN IRRITATION DUE TO ABRASIVENESS.
EYE EXPOSURE COULD CAUSE IRRITATION BUT NO TOXIC EFFECTS.

EFFECTS OF CHRONIC EXPOSURE TO PRODUCT: METAL FUMES IN THE VAPOURS FROM FIRING CERAMIC GLAZES MAY CAUSE LUNG INFLAMATION AND DAMAGE TO KIDNEY AND NERVOUS SYSTEM.

EXPOSURE LIMITS	IRRITANCY OF PRODUCT	SENSITIZATION TO PRODUCT	CARCINOGENICITY
TERATOGENCITY	REPRODUCTIVE TOXICITY	MUTAGENICITY	SYNERGISTIC PRODUCTS

SECTION 7 – PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT:

GLOVES (SPECIFY) WORK GLOVES	RESPIRATOR (SPECIFY) APPROVED DUST MASK	EYE (SPECIFY) SAFETY GLASSES
FOOTWEAR (SPECIFY)	CLOTHING (SPECIFY)	OTHER (SPECIFY)

ENGINEERING CONTROLS (SPECIFY,EG. VENTILATION, ENCLOSED PROCESS)
VENTILATION SHOULD BE USED WHEN SPRAYING GLAZES.

LEAK AND SPILL PROCEDURE: SCOOP INTO SUITABLE RECEPTACLE. DO NOT WASH DOWN DRAIN.

WASTE DISPOSAL: SEND TO APPROVED SITE IN ACCORDANCE WITH REGULATIONS.

HANDLING PROCEDURES AND EQUIPMENT: NO SPECIAL EQUIPEMENT NEEDED. FOLLOW STANDARD PLANT HYGIENE PROCEDURE.

STORAGE REQUIREMENTS: STORE IN DRY AREAS.

SPECIAL SHIPPING INFORMATION: PROTECT AGAINST PHYSICAL DAMAGE. **DOT** LABEL NON-REGULATED

SECTION 8 – FIRST AID MEASURES

SPECIFIC MEASURES: GLAZE CONTAINS THE OXIDES LISTED IN THE CHEMICAL FORMULA IN FORM OF CERAMIC FRIT. SOME OF THESE OXIDES ARE ON THE INGREDIENT DISCLOSURE LIST, ONCE THESE OXIDES ARE FUSED AND CONVERTED INTO FRIT THEY ARE NO LONGER AVAILABLE IN TOXIC FORM EVEN THOUGH TESTING WOULD DETECT THE PRESENCE OF THESE OXIDES. (FRIT IS ESSENTIALLY AN INSOLUBLE SUBSTANCE). THE OXIDES ARE PRESENT IN THE FORM OF A SINTERED CERAMIC STAIN OF LOW SOLUBILITY. tHESE INGREDIENTS ARE PRESENT IN A STABLE AQUEOUS SUSPENSION.

SECTION 9 – PREPARATION DATE OF MSDS

PREPARED BY (GROUP,DEPARTMENT,ETC.) TECHNICAL DEPT.	PHONE NUMBER: (905) 851-8310	DATE June 29, 2017

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT IDENTIFICATION AND USE

PRODUCT IDENTIFIER : SPECTRUM LEAD FREE 920 MIDNIGHT SKY	PRODUCT IDENTIFICATION NUMBER 920
PRODUCT USE : CERAMIC GLAZE	
MANUFACTURER'S NAME SPECTRUM GLAZES INC.	SUPPLIER'S NAME SPECTRUM GLAZES INC.
STREET ADDRESS 40 HANLAN RD UNIT 33	STREET ADDRESS 40 HANLAN RD UNIT 33
CITY WOODBRIDGE PROVINCE ONTARIO	CITY WOODBRIDGE PROVINCE ONTARIO
POSTAL CODE L4L 3P6 EMERGENCY TEL.NO.(905)851-8310	POSTAL CODE L4L 3P6 EMERGENCY TEL.NO.(905)851-8310

SECTION 2 - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	%	CAS NUMBER	LD50 OF INGREDIENTS (SPECIFY SPECIES AND ROUTE)	LC50 OF INGREDIENT (SPECIFY SPECIES)
SiO2	25-33	14808-60-7	ILV 15mg/m3 OSHA/TWA	
CaO	5-10			
Na2O	2-5	1305-78-8		
Al2O3	3-7	1344-28-1		
B2O3	4-8	10043-35-3		
ZrO2	4-7	744-67-2		
CERAMIC STAIN	3-6	1345-16-0		
ZnO	18-23	1314-13-2		
MgO	1-2			

SECTION 3 - PHYSICAL DATA

PHYSICAL STATE LIQUID	ODOUR AND APPEARANCE ODOURLESS LIQUID			ODOUR THRESHOLD(PPM) N.A.
VAPOUR PRESSURE (mm Hg) N.A.	VAPOUR DENSITY (AIR=1)	EVAPORATION RATE N.A.	BOILING POINT(C) N.A.	FREEZING POINT(C) N.A.
pH 6.5-7	SPECIFIC GRAVITY 1.6-2.0	COEFF. WATER/OIL DIST. N.A.		

SECTION 4 - FIRE AND EXPLOSION DATA

FLAMMABILITY YES__ NO X FLAMES UNDER WHICH CONDITIONS : THIS PRODUCT DOES NOT SUPPORT COMBUSTION

MEANS OF EXTINCTION NO SPECIAL MEANS REQUIRED

FLASHPOINT AND METHOD NONE	UPPER FLAMMABLE LIMIT (% BY VOLUME) N.A.	LOWER FLAMMABLE LIMIT (% BY VOLUME) N.A.
AUTOIGNITION TEMP.(C) N.A.	HAZARDOUS COMBUSTION PRODUCTS NONE	
EXPLOSION DATA N.A. SENSITIVITY IMPACT N.A.	ACTIVITY TO STATIC DISCHARGE N.A.	

SECTION 5 - REACTIVITY DATA

CHEMICAL STABILITY
YES X NO__ IF NO, UNDER WHICH CONDITIONS

INCOMPATIBILITY WITH OTHER SUBSTANCES
YES__ NO X IF SO WHICH ONESREACTIVITY

REACTIVITY AND UNDER WHAT CONDITIONS: NO REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCT: MATERIAL IS STABLE, NO POLYMERIZATION BUT TOXIC FUMES MAY BE RELEASED WHEN MATERIAL IS MELTED.

PRODUCT IDENTIFIER SPECTRUM LEAD FREE 920 MIDNIGHT SKY

SECTION 6 – TOXICOLOGICAL PROPERTIES

ROUTE OF ENTRY
SKIN CONTACT SKIN ABSORPTION X EYE CONTACT X INHALATION INGESTION X

EFFECTS OF ACUTE EXPOSURE TO PRODUCT: SKIN IRRITATION DUE TO ABRASIVENESS.
EYE EXPOSURE COULD CAUSE IRRITATION BUT NO TOXIC EFFECTS.

EFFECTS OF CHRONIC EXPOSURE TO PRODUCT: METAL FUMES IN THE VAPOURS FROM FIRING CERAMIC GLAZES MAY CAUSE LUNG INFLAMATION AND DAMAGE TO KIDNEY AND NERVOUS SYSTEM.

EXPOSURE LIMITS	IRRITANCY OF PRODUCT	SENSITIZATION TO PRODUCT	CARCINOGENICITY
TERATOGENCITY	REPRODUCTIVE TOXICITY	MUTAGENICITY	SYNERGISTIC PRODUCTS

SECTION 7 – PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT:

GLOVES (SPECIFY) WORK GLOVES	RESPIRATOR (SPECIFY) APPROVED DUST MASK	EYE (SPECIFY) SAFETY GLASSES
FOOTWEAR (SPECIFY)	CLOTHING (SPECIFY)	OTHER (SPECIFY)

ENGINEERING CONTROLS (SPECIFY,EG. VENTILATION, ENCLOSED PROCESS)
VENTILATION SHOULD BE USED WHEN SPRAYING GLAZES.

LEAK AND SPILL PROCEDURE: SCOOP INTO SUITABLE RECEPTACLE. DO NOT WASH DOWN DRAIN.

WASTE DISPOSAL: SEND TO APPROVED SITE IN ACCORDANCE WITH REGULATIONS.

HANDLING PROCEDURES AND EQUIPMENT: NO SPECIAL EQUIPEMENT NEEDED. FOLLOW STANDARD PLANT HYGIENE PROCEDURE.

STORAGE REQUIREMENTS: STORE IN DRY AREAS.

SPECIAL SHIPPING INFORMATION: PROTECT AGAINST PHYSICAL DAMAGE. **DOT** LABEL NON-REGULATED

SECTION 8 – FIRST AID MEASURES

SPECIFIC MEASURES: GLAZE CONTAINS THE OXIDES LISTED IN THE CHEMICAL FORMULA IN FORM OF CERAMIC FRIT. SOME OF THESE OXIDES ARE ON THE INGREDIENT DISCLOSURE LIST, ONCE THESE OXIDES ARE FUSED AND CONVERTED INTO FRIT THEY ARE NO LONGER AVAILABLE IN TOXIC FORM EVEN THOUGH TESTING WOULD DETECT THE PRESENCE OF THESE OXIDES. (FRIT IS ESSENTIALLY AN INSOLUBLE SUBSTANCE). THE OXIDES ARE PRESENT IN THE FORM OF A SINTERED CERAMIC STAIN OF LOW SOLUBILITY. tHESE INGREDIENTS ARE PRESENT IN A STABLE AQUEOUS SUSPENSION.

SECTION 9 – PREPARATION DATE OF MSDS

PREPARED BY (GROUP,DEPARTMENT,ETC.) TECHNICAL DEPT.	PHONE NUMBER: (905) 851-8310	DATE August 11, 2005

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT IDENTIFICATION AND USE

PRODUCT IDENTIFIER : SPECTRUM LEAD FREE 921 IRON EARTH	PRODUCT IDENTIFICATION NUMBER 921
PRODUCT USE : CERAMIC GLAZE	
MANUFACTURER'S NAME SPECTRUM GLAZES INC.	SUPPLIER'S NAME SPECTRUM GLAZES INC.
STREET ADDRESS 40 HANLAN RD UNIT 33	STREET ADDRESS 40 HANLAN RD UNIT 33
CITY WOODBRIDGE PROVINCE ONTARIO	CITY WOODBRIDGE PROVINCE ONTARIO
POSTAL CODE L4L 3P6 EMERGENCY TEL.NO.(905)851-8310	POSTAL CODE L4L 3P6 EMERGENCY TEL.NO.(905)851-8310

SECTION 2 - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	%	CAS NUMBER	LD50 OF INGREDIENTS (SPECIFY SPECIES AND ROUTE)	LC50 OF INGREDIENT (SPECIFY SPECIES)
SiO2	25-33	14808-60-7	ILV 15mg/m3 OSHA/TWA	
CaO	5-10			
Na2O	2-5	1305-78-8		
Al2O3	3-7	1344-28-1		
B2O3	4-8	10043-35-3		
ZrO2	4-7	744-67-2		
CERAMIC STAIN	3-6	68187-13-3		
ZnO	18-23	1314-13-2		
MgO	1-2			

SECTION 3 - PHYSICAL DATA

PHYSICAL STATE LIQUID	ODOUR AND APPEARANCE ODOURLESS LIQUID			ODOUR THRESHOLD(PPM) N.A.
VAPOUR PRESSURE (mm Hg) N.A.	VAPOUR DENSITY (AIR=1)	EVAPORATION RATE N.A.	BOILING POINT(C) N.A.	FREEZING POINT(C) N.A.
pH 6.5-7	SPECIFIC GRAVITY 1.6-2.0	COEFF. WATER/OIL DIST. N.A.		

SECTION 4 - FIRE AND EXPLOSION DATA

FLAMMABILITY YES__ NO X FLAMES UNDER WHICH CONDITIONS : THIS PRODUCT DOES NOT SUPPORT COMBUSTION

MEANS OF EXTINCTION NO SPECIAL MEANS REQUIRED

FLASHPOINT AND METHOD NONE	UPPER FLAMMABLE LIMIT (% BY VOLUME) N.A.	LOWER FLAMMABLE LIMIT (% BY VOLUME) N.A.
AUTOIGNITION TEMP.(C) N.A.	HAZARDOUS COMBUSTION PRODUCTS NONE	
EXPLOSION DATA N.A. SENSITIVITY IMPACT N.A.	ACTIVITY TO STATIC DISCHARGE N.A.	

SECTION 5 - REACTIVITY DATA

CHEMICAL STABILITY
YES X NO__ IF NO, UNDER WHICH CONDITIONS

INCOMPATIBILITY WITH OTHER SUBSTANCES
YES__ NO X IF SO WHICH ONESREACTIVITY

REACTIVITY AND UNDER WHAT CONDITIONS: NO REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCT: MATERIAL IS STABLE, NO POLYMERIZATION BUT TOXIC FUMES MAY BE RELEASED WHEN MATERIAL IS MELTED.

PRODUCT IDENTIFIER SPECTRUM LEAD FREE 921 IRON EARTH

SECTION 6 – TOXICOLOGICAL PROPERTIES

ROUTE OF ENTRY
SKIN CONTACT SKIN ABSORPTION X EYE CONTACT X INHALATION INGESTION X

EFFECTS OF ACUTE EXPOSURE TO PRODUCT: SKIN IRRITATION DUE TO ABRASIVENESS.
EYE EXPOSURE COULD CAUSE IRRITATION BUT NO TOXIC EFFECTS.

EFFECTS OF CHRONIC EXPOSURE TO PRODUCT: METAL FUMES IN THE VAPOURS FROM FIRING CERAMIC GLAZES MAY CAUSE LUNG INFLAMATION AND DAMAGE TO KIDNEY AND NERVOUS SYSTEM.

EXPOSURE LIMITS	IRRITANCY OF PRODUCT	SENSITIZATION TO PRODUCT	CARCINOGENICITY
TERATOGENCITY	REPRODUCTIVE TOXICITY	MUTAGENICITY	SYNERGISTIC PRODUCTS

SECTION 7 – PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT:

GLOVES (SPECIFY) WORK GLOVES	RESPIRATOR (SPECIFY) APPROVED DUST MASK	EYE (SPECIFY) SAFETY GLASSES
FOOTWEAR (SPECIFY)	CLOTHING (SPECIFY)	OTHER (SPECIFY)

ENGINEERING CONTROLS (SPECIFY,EG. VENTILATION, ENCLOSED PROCESS)
VENTILATION SHOULD BE USED WHEN SPRAYING GLAZES.

LEAK AND SPILL PROCEDURE: SCOOP INTO SUITABLE RECEPTACLE. DO NOT WASH DOWN DRAIN.

WASTE DISPOSAL: SEND TO APPROVED SITE IN ACCORDANCE WITH REGULATIONS.

HANDLING PROCEDURES AND EQUIPMENT: NO SPECIAL EQUIPEMENT NEEDED. FOLLOW STANDARD PLANT HYGIENE PROCEDURE.

STORAGE REQUIREMENTS: STORE IN DRY AREAS.

SPECIAL SHIPPING INFORMATION: PROTECT AGAINST PHYSICAL DAMAGE. **DOT** LABEL NON-REGULATED

SECTION 8 – FIRST AID MEASURES

SPECIFIC MEASURES: GLAZE CONTAINS THE OXIDES LISTED IN THE CHEMICAL FORMULA IN FORM OF CERAMIC FRIT. SOME OF THESE OXIDES ARE ON THE INGREDIENT DISCLOSURE LIST, ONCE THESE OXIDES ARE FUSED AND CONVERTED INTO FRIT THEY ARE NO LONGER AVAILABLE IN TOXIC FORM EVEN THOUGH TESTING WOULD DETECT THE PRESENCE OF THESE OXIDES. (FRIT IS ESSENTIALLY AN INSOLUBLE SUBSTANCE). THE OXIDES ARE PRESENT IN THE FORM OF A SINTERED CERAMIC STAIN OF LOW SOLUBILITY. tHESE INGREDIENTS ARE PRESENT IN A STABLE AQUEOUS SUSPENSION.

SECTION 9 – PREPARATION DATE OF MSDS

PREPARED BY (GROUP,DEPARTMENT,ETC.) TECHNICAL DEPT.	PHONE NUMBER: (905) 851-8310	DATE May 11, 2017

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT IDENTIFICATION AND USE

PRODUCT IDENTIFIER : SPECTRUM LEAD FREE 922 RUSSET	PRODUCT IDENTIFICATION NUMBER 922
PRODUCT USE : CERAMIC GLAZE	
MANUFACTURER'S NAME SPECTRUM GLAZES INC.	SUPPLIER'S NAME SPECTRUM GLAZES INC.
STREET ADDRESS 40 HANLAN RD UNIT 33	STREET ADDRESS 40 HANLAN RD UNIT 33
CITY WOODBRIDGE PROVINCE ONTARIO	CITY WOODBRIDGE PROVINCE ONTARIO
POSTAL CODE L4L 3P6 EMERGENCY TEL.NO.(905)851-8310	POSTAL CODE L4L 3P6 EMERGENCY TEL.NO.(905)851-8310

SECTION 2 - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	%	CAS NUMBER	LD50 OF INGREDIENTS (SPECIFY SPECIES AND ROUTE)	LC50 OF INGREDIENT (SPECIFY SPECIES)
SiO2	25-33	14808-60-7	ILV 15mg/m3 OSHA/TWA	
CaO	5-10			
Na2O	2-5	1305-78-8		
Al2O3	3-7	1344-28-1		
B2O3	4-8	10043-35-3		
ZrO2	4-7	744-67-2		
CERAMIC STAIN	.1	1345-16-0		
ZnO	18-23	1314-13-2		
MgO	1-2			
Fe2O3	3-5	1309-37-1		

SECTION 3 - PHYSICAL DATA

PHYSICAL STATE LIQUID	ODOUR AND APPEARANCE ODOURLESS LIQUID			ODOUR THRESHOLD(PPM) N.A.
VAPOUR PRESSURE (mm Hg) N.A.	VAPOUR DENSITY (AIR=1)	EVAPORATION RATE N.A.	BOILING POINT(C) N.A.	FREEZING POINT(C) N.A.
pH 6.5-7	SPECIFIC GRAVITY 1.6-2.0	COEFF. WATER/OIL DIST. N.A.		

SECTION 4 - FIRE AND EXPLOSION DATA

FLAMMABILITY YES__ NO X FLAMES UNDER WHICH CONDITIONS : THIS PRODUCT DOES NOT SUPPORT COMBUSTION

MEANS OF EXTINCTION NO SPECIAL MEANS REQUIRED

FLASHPOINT AND METHOD NONE	UPPER FLAMMABLE LIMIT (% BY VOLUME) N.A.	LOWER FLAMMABLE LIMIT (% BY VOLUME) N.A.
AUTOIGNITION TEMP.(C) N.A.	HAZARDOUS COMBUSTION PRODUCTS NONE	
EXPLOSION DATA N.A. SENSITIVITY IMPACT N.A.	ACTIVITY TO STATIC DISCHARGE N.A.	

SECTION 5 - REACTIVITY DATA

CHEMICAL STABILITY
YES X NO__ IF NO, UNDER WHICH CONDITIONS

INCOMPATIBILITY WITH OTHER SUBSTANCES
YES__ NO X IF SO WHICH ONESREACTIVITY

REACTIVITY AND UNDER WHAT CONDITIONS: NO REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCT: MATERIAL IS STABLE, NO POLYMERIZATION BUT TOXIC FUMES MAY BE RELEASED WHEN MATERIAL IS MELTED.

PRODUCT IDENTIFIER SPECTRUM LEAD FREE 922 RUSSET

SECTION 6 – TOXICOLOGICAL PROPERTIES

ROUTE OF ENTRY
SKIN CONTACT SKIN ABSORPTION X EYE CONTACT X INHALATION INGESTION X

EFFECTS OF ACUTE EXPOSURE TO PRODUCT: SKIN IRRITATION DUE TO ABRASIVENESS.
EYE EXPOSURE COULD CAUSE IRRITATION BUT NO TOXIC EFFECTS.

EFFECTS OF CHRONIC EXPOSURE TO PRODUCT: METAL FUMES IN THE VAPOURS FROM FIRING CERAMIC GLAZES MAY CAUSE LUNG INFLAMATION AND DAMAGE TO KIDNEY AND NERVOUS SYSTEM.

EXPOSURE LIMITS	IRRITANCY OF PRODUCT	SENSITIZATION TO PRODUCT	CARCINOGENICITY
TERATOGENCITY	REPRODUCTIVE TOXICITY	MUTAGENICITY	SYNERGISTIC PRODUCTS

SECTION 7 – PREVENTIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT:

GLOVES (SPECIFY) WORK GLOVES	RESPIRATOR (SPECIFY) APPROVED DUST MASK	EYE (SPECIFY) SAFETY GLASSES
FOOTWEAR (SPECIFY)	CLOTHING (SPECIFY)	OTHER (SPECIFY)

ENGINEERING CONTROLS (SPECIFY,EG. VENTILATION, ENCLOSED PROCESS)
VENTILATION SHOULD BE USED WHEN SPRAYING GLAZES.

LEAK AND SPILL PROCEDURE: SCOOP INTO SUITABLE RECEPTACLE. DO NOT WASH DOWN DRAIN.

WASTE DISPOSAL: SEND TO APPROVED SITE IN ACCORDANCE WITH REGULATIONS.

HANDLING PROCEDURES AND EQUIPMENT: NO SPECIAL EQUIPEMENT NEEDED. FOLLOW STANDARD PLANT HYGIENE PROCEDURE.

STORAGE REQUIREMENTS: STORE IN DRY AREAS.

SPECIAL SHIPPING INFORMATION: PROTECT AGAINST PHYSICAL DAMAGE. **DOT** LABEL NON-REGULATED

SECTION 8 – FIRST AID MEASURES

SPECIFIC MEASURES: GLAZE CONTAINS THE OXIDES LISTED IN THE CHEMICAL FORMULA IN FORM OF CERAMIC FRIT. SOME OF THESE OXIDES ARE ON THE INGREDIENT DISCLOSURE LIST, ONCE THESE OXIDES ARE FUSED AND CONVERTED INTO FRIT THEY ARE NO LONGER AVAILABLE IN TOXIC FORM EVEN THOUGH TESTING WOULD DETECT THE PRESENCE OF THESE OXIDES. (FRIT IS ESSENTIALLY AN INSOLUBLE SUBSTANCE). THE OXIDES ARE PRESENT IN THE FORM OF A SINTERED CERAMIC STAIN OF LOW SOLUBILITY. tHESE INGREDIENTS ARE PRESENT IN A STABLE AQUEOUS SUSPENSION.

SECTION 9 – PREPARATION DATE OF MSDS

PREPARED BY (GROUP,DEPARTMENT,ETC.) TECHNICAL DEPT.	PHONE NUMBER: (905) 851-8310	DATE August 11, 2005

12-22-03 ✓

43306-1005
-1007

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY (As Used on Label and List)
SPEEDBALL Screen Drawing Fluid (4531 & 4571)

Section I

Manufacturer's Name

SPEEDBALL ART PRODUCTS
2226 SPEEDBALL ROAD
STATESVILLE, NC 28677

Emergency Telephone Number: 704-838-1475

Telephone Number for Information: 704-838-1475

Date Prepared: 6/29/02

Signature of Preparer (optional):

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)

Approved for the AP Seal (Non-Toxic) as per the Art & Creative Materials Institute, Inc. (ACMI). Product labeling conforms to ASTM D4236.

Note: This product has been evaluated by the Toxicologist only as per intented usage. Do not deviate from intended usage!

V.O.C.: 0

V.39a/

Section III — Physical/Chemical Characteristics

Boiling Point	212°F.	Specific Gravity (H_2O = 1)	1.19
Vapor Pressure (mm Hg.)	Unknown	Melting Point	<32°F.
Vapor Density (AIR = 1)	less than 1	Evaporation Rate (Butyl Acetate = 1)	less than 1

Solubility in Water: Dilutable

Appearance and Odor: Translucent Blue Color with a slight ordor

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
Not applicable (N/A)	N/A	N/A	N/A

Extinguishing Media: N/A

Special Fire Fighting Procedures: wear self-contained breathing apparatus (pressure-demand, MSHA/NIOSH approved or equivalent) and full protective gear.

Unusual Fire and Explosion Hazards: ~~Material can spatter above 212°F. Film can burn.~~

Stability	Unstable		Conditions to Avoid
	Stable	X	Onset of decomposition is 350°F.

Incompatibility (*Materials to Avoid*) N/A

Hazardous Decomposition or Byproducts
Oxides of carbon and nitrogen.

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	N/A

Section VI — Health Hazard Data

Route(s) of Entry: N/A Inhalation? Skin? Ingestion?

Health Hazards (*Acute and Chronic*)
N/A

Carcinogenicity: N/A NTP? IARC Monographs? OSHA Regulated?

Signs and Symptoms of Exposure N/A

Medical Conditions Generally Aggravated by Exposure N/A

Emergency and First Aid Procedures Contact with eyes may cause mild irritation: Flush with water.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material Is Released or Spilled
Floor may be slippery; use care to avoid falling. No special handling required under normal use conditions. For large quantities(quart or more), transfer to containers for recovery or disposal and keep out of municipal sewers & open bodi of water.

Waste Disposal Method
No special handling required under normal use conditions. Incinerate large quantities(quart or more) at a permitted facility according to local, state & Fed. regulation

Precautions to Be Taken in Handling and Storing
Keep from freezing - product may coagulate.

Other Precautions N/A

Section VIII — Control Measures

Respiratory Protection (*Specify Type*)
None required with adequate ventilation & normal operating conditions.

Ventilation	Local Exhaust	Special
	Adequate	
	Mechanical (General)	Other

Protective Gloves	Eye Protection
Impervious	Safety glasses

Other Protective Clothing or Equipment N/A

Work/Hygienic Practices
Use protective cream where excessive skin contact is likely.

SAFETY DATA SHEET

9/2/2015

SECTION I - IDENTIFICATION

Material Name
BLACK INDIA INK

Company Information
Speedball Art Products Co.
P.O. Box 5157
2301 Speedball Road
Statesville, NC 28677
Phone: 704-978-4166
Fax: 1-704-838-1472
Email: budmartin@speedballart.com

For transportation emergencies only call: 1-800-898-7224

For health emergencies call the Poison Control Center: 1-800-222-1222

SECTION II - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

There are no GHS label elements.

PRIMARY ROUTES OF ENTRY: INHALATION, INGESTION, EYE, SKIN

EFFECTS AND SYMPTOMS OF ACUTE EXPOSURE: NONE EXPECTED

EFFECTS AND SYMPTOMS OF CHRONIC EXPOSURE: NONE EXPECTED

CARCINOGEN LISTING: NTP: **NO** IARC: **NO** OSHA: **NO**

SEE SECTION III FOR COMPONENTS AFFECTED

MEDICAL CONDITIONS USUALLY AGGRAVATED BY OVER EXPOSURE TO THIS PRODUCT: NONE

SECTION III - COMPOSITION / INFORMATION ON HAZARDOUS INGREDIENTS

Hazardous Ingredients	CAS/EC #	PEL/TLV (MG/M#)	Max % Weight	NTP	IARC
None					

SECTION IV - FIRST AID MEASURES

FIRST AID MEASURES: NONE REQUIRED. NO ACUTE HEALTH EFFECTS EXPECTED.

SECTION V - FIRE FIGHTING MEASURES

FLASH POINT (METHOD): N/A
AUTOIGNITION TEMPERATURE: N/A
EXPLOSION LIMITS IN AIR (% BY VOLUME): NOT EXPLOSIVE

EXTINGUISHING MEDIA: NO SPECIAL MEDIA REQUIRED
FIRE FIGHTING PROCEDURES: NO SPECIAL FIRE FIGHTING PROCEDURES REQUIRED
UNUSUAL FIRE & EXPLOSION HAZARDS: NOT COMBUSTIBLE

SECTION VI - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE A MATERIAL IS SPILLED: Clean up in accordance with all applicable regulations. Absorb spillage with non-combustible, absorbent material. For waste disposal, see Section XIII

SECTION VII - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN DURING STORAGE AND HANDLING: Good industrial hygiene practice requires that exposure be maintained below the TLV. This is preferably achieved through the provision of adequate ventilation. When exposure cannot be adequately controlled in this way, personal respiratory protection should be employed.

SECTION VIII - EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATORY PROTECTION AND SPECIAL VENTILATION REQUIREMENTS: NONE REQUIRED
OTHER PROTECTIVE EQUIPMENT (GLOVES, GOGGLES, ETC): NONE REQUIRED
WORK/HYGIENE PRACTICES: NONE REQUIRED
ENGINEERING CONTROLS: NONE REQUIRED

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: N/A
MELTING POINT: N/A
VAPOR PRESSURE: N/A
SPECIFIC VAPOR DENSITY (AIR=1): N/A
SPECIFIC GRAVITY: N/A
SOLUBILITY IN WATER: N/A
REACTIVITY IN WATER: NON-REACTIVE

SECTION X - STABILITY AND REACTIVITY

HAZARDOUS POLYMERIZATION PRODUCTS: NONE
STABILITY: STABLE CONDITIONS TO AVOID: NONE
INCOMPATIBILITY (MATERIALS TO AVOID): NONE
HAZARDOUS DECOMPOSITION PRODUCTS: NONE

SECTION XI - TOXICOLOGICAL INFORMATION

ACUTE EFFECTS ASSOCIATED WITH USE OF THIS MATERIAL: NONE EXPECTED
The summated LD50 is >50000 mg/kg.
The summated LC50 is 99999 mg/cubic meter.
This product is not considered to be a known or suspected human carcinogen by NTP, IARC or OSHA (see section III)

SECTION XII - ECOLOGICAL INFORMATION

NO HARMFUL EFFECTS KNOWN OTHER THAN THOSE ASSOCIATED WITH SUSPENDED INERT SOLIDS IN WATER.

SECTION XIII - DISPOSAL CONSIDERATIONS

RCRA HAZARD CLASS (40 CFR 261): THIS PRODUCT IS NOT CLASSIFIED AS A HAZARDOUS WASTE.
WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION XIV - TRANSPORTATION INFORMATION

[U.S. DOT (49 CFR 172.101): THIS IS NOT A HAZARDOUS MATERIAL AS CLASSIFIED BY CFR 172.101.]

SECTION XV - REGULATORY INFORMATION

CONTENTS OF THIS SDS COMPLY WITH OSHA HAZARD COMMUNICATION STANDARD 29 CFR 1910.1200
EPA SARA TITLE III CHEMICAL LISTINGS
NONE

SECTION 302.4 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):
NONE

SECTION 313 TOXIC CHEMICALS (40 CFR 372):
NONE

INTERNATIONAL REGULATIONS

CANADIAN WHMIS: THIS PRODUCT IS A CONTROLLED PRODUCT UNDER CANADA'S WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM. IT CONTAINS THE FOLLOWING TOXIC OR HIGHLY TOXIC MATERIALS:
2-DIMETHYLAMINOETHANOL

SUPPLEMENTAL STATE COMPLIANCE INFORMATION:

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL(S) LISTED UNDER NEW JERSEY'S RIGHT TO KNOW PROGRAM:
2-DIMETHYLAMINOETHANOL
AQUEOUS BORATED SHELLAC

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL(S) REQUIRING NOTIFICATION TO THE STATE OF WASHINGTON UNDER THEIR CHILDREN'S SAFE PRODUCTS ACT:
NONE

Under CPSC's consumer product regulations (16CFR1500.3 and 150014), this product has the following required acute and chronic hazard labeling:

NONE

SECTION XVI - OTHER INFORMATION

LAST REVISION DATE: 09/02/2015

Prepared by Duke OEM Toxicology

SAFETY DATA SHEET

7/7/2015

SECTION I - IDENTIFICATION

Material Name
SPEEDBALL W/S BLOCK PRINTING INK

Manufacturer Information
Speedball Art Products Co.
P.O. Box 5157
2301 Speedball Road
Statesville, NC 28677
Phone: 704-978-4166
Fax: 1-704-838-1472
Email: budmartin@speedballart.com

For transportation emergencies only call: 1-800-898-7224

For health emergencies call the Poison Control Center: 1-800-222-1222

SECTION II - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

There are no GHS label elements.

PRIMARY ROUTES OF ENTRY: INHALATION, INGESTION, EYE, SKIN

EFFECTS AND SYMPTOMS OF ACUTE EXPOSURE: NONE EXPECTED

EFFECTS AND SYMPTOMS OF CHRONIC EXPOSURE: NONE EXPECTED

CARCINOGEN LISTING: NTP: **NO** IARC: **NO** OSHA: **NO**

SEE SECTION III FOR COMPONENTS AFFECTED

MEDICAL CONDITIONS USUALLY AGGRAVATED BY OVER EXPOSURE TO THIS PRODUCT: NONE

SECTION III - COMPOSITION / INFORMATION ON HAZARDOUS INGREDIENTS

Hazardous Ingredients	CAS/EC #	PEL/TLV (MG/M#)	Max % Weight	NTP	IARC
None					

SECTION IV - FIRST AID MEASURES

FIRST AID MEASURES: NONE REQUIRED. NO ACUTE HEALTH EFFECTS EXPECTED.

SECTION V - FIRE FIGHTING MEASURES

FLASH POINT (METHOD): N/A
AUTOIGNITION TEMPERATURE: N/A
EXPLOSION LIMITS IN AIR (% BY VOLUME): NOT EXPLOSIVE

EXTINGUISHING MEDIA: NO SPECIAL MEDIA REQUIRED
FIRE FIGHTING PROCEDURES: NO SPECIAL FIRE FIGHTING PROCEDURES REQUIRED
UNUSUAL FIRE & EXPLOSION HAZARDS: NOT COMBUSTIBLE

SECTION VI - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE A MATERIAL IS SPILLED: Clean up in accordance with all applicable regulations. Absorb spillage with non-combustible, absorbent material. For waste disposal, see Section XIII

SECTION VII - HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN DURING STORAGE AND HANDLING: Good industrial hygiene practice requires that exposure be maintained below the TLV. This is preferably achieved through the provision of adequate ventilation. When exposure cannot be adequately controlled in this way, personal respiratory protection should be employed.

SECTION VIII - EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATORY PROTECTION AND SPECIAL VENTILATION REQUIREMENTS: NONE REQUIRED
OTHER PROTECTIVE EQUIPMENT (GLOVES, GOGGLES, ETC): NONE REQUIRED
WORK/HYGIENE PRACTICES: NONE REQUIRED
ENGINEERING CONTROLS: NONE REQUIRED

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: N/A
MELTING POINT: N/A
VAPOR PRESSURE: N/A
SPECIFIC VAPOR DENSITY (AIR=1): N/A
SPECIFIC GRAVITY: N/A
SOLUBILITY IN WATER: N/A
REACTIVITY IN WATER: NON-REACTIVE

SECTION X - STABILITY AND REACTIVITY

HAZARDOUS POLYMERIZATION PRODUCTS: NONE
STABILITY: STABLE CONDITIONS TO AVOID: NONE
INCOMPATIBILITY (MATERIALS TO AVOID): NONE
HAZARDOUS DECOMPOSITION PRODUCTS: NONE

SECTION XI - TOXICOLOGICAL INFORMATION

ACUTE EFFECTS ASSOCIATED WITH USE OF THIS MATERIAL: NONE EXPECTED
The summated LD50 is 8546.6 mg/kg.
The summated LC50 is 99999 mg/cubic meter.
This product is not considered to be a known or suspected human carcinogen by NTP, IARC or OSHA (see section III)

SECTION XII - ECOLOGICAL INFORMATION

NO HARMFUL EFFECTS KNOWN OTHER THAN THOSE ASSOCIATED WITH SUSPENDED INERT SOLIDS IN WATER.

SECTION XIII - DISPOSAL CONSIDERATIONS

RCRA HAZARD CLASS (40 CFR 261): THIS PRODUCT IS NOT CLASSIFIED AS A HAZARDOUS WASTE.
WASTE DISPOSAL METHOD: DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

SECTION XIV - TRANSPORTATION INFORMATION

U.S. DOT (49 CFR 172.101): THIS IS NOT A HAZARDOUS MATERIAL AS CLASSIFIED BY CFR 172.101.

SECTION XV - REGULATORY INFORMATION

CONTENTS OF THIS SDS COMPLY WITH OSHA HAZARD COMMUNICATION STANDARD 29 CFR 1910.1200
EPA SARA TITLE III CHEMICAL LISTINGS
NONE

SECTION 302.4 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):
NONE

SECTION 313 TOXIC CHEMICALS (40 CFR 372):
ALUMINUM

INTERNATIONAL REGULATIONS

CANADIAN WHMIS: THIS PRODUCT IS A CONTROLLED PRODUCT UNDER CANADA'S WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM. IT CONTAINS THE FOLLOWING TOXIC OR HIGHLY TOXIC MATERIALS:
ALUMINUM
FERRIC OXIDE
GUM ARABIC
MICA
OCTYLPHENOXYPOLYETHOXYETHANOL
PROPYLENE GLYCOL

SUPPLEMENTAL STATE COMPLIANCE INFORMATION:

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL(S) LISTED UNDER NEW JERSEY'S RIGHT TO KNOW PROGRAM:
AMMONIUM HYDROXIDE
GUM ARABIC
MICA
PIGMENT RED 101
PIGMENT WHITE 6
SODIUM NITRATE

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICAL(S) REQUIRING NOTIFICATION TO THE STATE OF WASHINGTON UNDER THEIR CHILDREN'S SAFE PRODUCTS ACT:
NONE

Under CPSC's consumer product regulations (16CFR1500.3 and 150014), this product has the following required acute and chronic hazard labeling:

NONE

SECTION XVI - OTHER INFORMATION

LAST REVISION DATE: 07/07/2015

Prepared by Duke OEM Toxicology

COLOR INFORMATION

THIS SDS APPLIES TO THE FOLLOWING COLORS WHICH ARE ASSOCIATED WITH HAZARDOUS AND/OR NON-HAZARDOUS INGREDIENTS

Product Color	SKU	Hazardous Ingredient
3400 BLACK		(NONE)
3401 RED		(NONE)
3402 BLUE		(NONE)
3403 WHITE		(NONE)
3404 GREEN		(NONE)
3405 YELLOW		(NONE)
3406 BROWN		(NONE)
3407 ORANGE		(NONE)
3408 VIOLET		(NONE)
3409 TURQUOISE		(NONE)
3410 MAGENTA		(NONE)
3411 LIGHT RED		(NONE)
3412 DARK YELLOW		(NONE)
3413 GOLD		(NONE)
3414 SILVER		(NONE)
3448 RETARDER		(NONE)
3449 EXTENDER		(NONE)
COPPER		(NONE)
PEWTER		(NONE)
PLATINUM WHITE		(NONE)
PROCESS CYAN		(NONE)
PROCESS MAGENTA		(NONE)
PROCESS YELLOW		(NONE)

BRAND NAMES

THIS SDS APPLIES TO THE FOLLOWING BRAND NAMES

Brand Name	SKU	SKU Description
SPEEDBALL W/S BLOCK PRINTING INK		
DICK BLICK W/S BLOCK PRINTING INK		
SAX TRUE FLOW WATER SOLUBLE BLOCK PRINTING INK		
TRIARCO BLOCK INK		
NASCO WATER SOLUBLE BLOCK PRINTING INK-STUDIO QUALITY		

Material Safety Data Sheet

May be used to comply with
OSHA's Hazard Communication Standard, 29 CFR 1910.1200
Standard must be consulted for specific requirements.

U.S. Department of Labor

Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved OMB No. 1218-0072

IDENTITY *(As Used on Label and List)* **Water Soluble Screen Printing Ink (4540-4549, 4580-4589, 4572)**	Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.
Section I Manufacturer's Name **Speedball Art Products, LLC**	Emergency Telephone Number **704-838-1475**
Address *(Number, Street, City, State, and ZIP Code)* **2301 Speedball Road Statesville, NC 28677 USA**	Telephone Number for Information **704-838-1475**
Date Prepared: **January 1, 2010**	Signature of Preparer *(optional)*

Section II – Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s)):	OSHA PEL	ACGIH TLV	Other Limits Recommended	%*(optional)*
VOC: 106-134 grams per litre (.88-1.12 lbs. per gallon)				
Product labeling conforms to ASTM D-4236. Approved for the AP seal as per the Art & Craft Materials Institute, Inc. (ACMI). Note: This product has been certified to be non-toxic. This product has been evaluated by a Toxicologist only as per intended usage. DO NOT DEVIATE FROM INTENDED USE.				

Section III - Physical/Chemical Characteristics

Boiling Point	**212°F-369°F**	Specific Gravity (H_2O = 1)	**1.11-1.57**
Vapor Pressure (mm Hg.)	**N/A**	Melting Point	**<32°F**
Vapor Density (AIR = 1)	**Less than 1**	Evaporation Rate (Butyl Acetate = 1)	**Less than 1**
Solubility in Water	**Dilutable**	Appearance and Odor	**Semi-paste with slight odor**

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used) **N/A**	Flammable Limits **N/A**	LEL **N/A**	UEL **N/A**
Extinguishing Media **N/A**			
Special Fire Fighting Procedures **Wear self-contained breathing apparatus (pressure-demand MSHA/NIOSH approved or equivalent) and full protective gear.**			
Unusual Fire and Explosion Hazards **Material can spatter above 212°F. Film can burn.**			

Stability	Unstable	Stable ✓	Conditions to Avoid **Onset of decomposition is 350°F**
Incompatibility *(Materials to Avoid)* **N/A**			
Hazardous Decomposition or Byproducts **Oxides of carbon and nitrogen**			
Hazardous Polymerization	May Occur	Will Not Occur ✓	Conditions to Avoid **N/A**

Section VI - Health Hazard Data

Route(s) of Entry:	Inhalation? **N/A**	Skin? **N/A**	Ingestion? **N/A**
Health Hazards *(Acute and Chronic)* **N/A**			
Carcinogenicity: **N/A**	NTP? **N/A**	IARC Monographs? **N/A**	OSHA Regulated? **N/A**
Signs and Symptoms of Exposure **N/A**			
Medical Conditions Generally Aggravated by Exposure **None known**			
Emergency and First Aid Procedures **Contact with eyes may cause slight irritation: Flush with water.**			

Section VII - Precautions for Safe Handling and Use

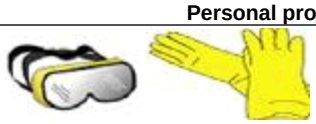
Steps to Be Taken in Case Material is Released or Spilled **Floor may be slippery; use care to avoid falling. Transfer to containers for recovery or disposal. Keep out of municipal sewers and open bodies of water.**
Waste Disposal Method **Incineration at permitted facility. Observe all Federal, State and local laws concerning health and environment.**
Precautions to Be taken in Handling and Storing **Keep from freezing-product may coagulate**
Other Precautions **N/A**

Section VIII - Control Measures

Respiratory Protection *(Specify Type)* **None required with adequate ventilation & normal usage conditions.**		
Ventilation	Local Exhaust **N/A**	Special **N/A**
	Mechanical *(General)* **N/A**	Other **N/A**

Protective Gloves **Impervious**	Eye Protection **Safety Glasses or goggles**
Other Protective Clothing or Equipment **N/A**	
Work/Hygienic Practices **Use protective cream where excessive skin contact is likely.**	

SPEEDTRACK Clean & Burnish Fragrance Free

HMIS		NFPA		Personal protective equipment
Health	2	**Health**	2	
Fire Hazard	0	**Flammability**	0	
Reactivity	0	**Instability**	0	

Version Number: 2

Preparation date: 2010-01-12

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: SPEEDTRACK Clean & Burnish Fragrance Free

MSDS #: MS0300546
Product Code: 4033110
Recommended use: Industrial/Institutional. Cleaning product. This product is intended to be diluted prior to use.

Manufacturer, importer, supplier:

US Headquarters
Diversey, Inc.
8310 16th St.
Sturtevant, Wisconsin 53177-1964
Phone: 1-888-352-2249
MSDS Internet Address:
www.johnsondiversey.com

Canadian Headquarters
Diversey, Inc. - Canada, Inc.
2401 Bristol Circle
Oakville, Ontario L6H 6P1
Phone: 1-800-668-3131

Emergency telephone number: 1-800-851-7145 (U.S.); 1-651-917-6133 (Int'l)

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
WARNING. CAUSES EYE IRRITATION. MAY BE MILDLY IRRITATING TO SKIN.

Principle routes of exposure: Eye contact. Skin contact. Inhalation.
Eye contact: Severe eye irritation.
Skin contact: May be mildly irritating to skin.
Inhalation: May be irritating to nose, throat, and respiratory tract.
Ingestion: May cause irritation to mouth, throat and stomach .

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS #	Weight %	LD50 Oral - Rat (mg/kg)	LD50 Dermal - Rabbit	LC50 Inhalation - Rat
Sodium dodecylbenzene sulfonate	25155-30-0	1 - 5%	998	Not available	Not available
Alcohol ethoxylates	68439-46-3	5 - 10%	1400	>2 g/kg	Not available

4. FIRST AID MEASURES

Eye contact: Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention.
Skin contact: Flush immediately with plenty of water. If irritation develops, get medical attention.
Inhalation: If breathing is affected, remove to fresh air. Get medical attention.
Ingestion: Give a cupful of water or milk . THEN IMMEDIATELY CONTACT A PHYSICIAN OR POISON CENTER. DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
Aggravated Medical Conditions: None known

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: The product is not flammable. Extinguish fire using agent suitable for surrounding fire.
Specific hazards: Not applicable.
Unusual hazards: None known.
Specific methods: No special methods required.

Special protective equipment for firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Extinguishing media which must not be used for safety reasons: No information available.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment.
Environmental precautions and clean-up methods: Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal. Use a water rinse for final clean-up.

7. HANDLING AND STORAGE

Handling:
Avoid contact with skin, eyes and clothing. Do not taste or swallow. Remove and wash contaminated clothing and footwear before re-use. Wash thoroughly after handling. Product residue may remain on/in empty containers. All precautions for handling the product must be used in handling the empty container and residue. . FOR COMMERCIAL AND INDUSTRIAL USE ONLY.
Storage:
Protect from freezing. Keep tightly closed in a dry, cool and well-ventilated place. KEEP OUT OF REACH OF CHILDREN.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures to reduce exposure:
No special ventilation requirements General room ventilation is adequate

Personal Protective Equipment

Eye protection: Chemical-splash goggles.
Hand protection: Chemical-resistant gloves
Skin and body protection: No special protective clothing is required.
Respiratory protection: No special protective clothing is required.
Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Appearance: Liquid
Vapor density: No information available
Color: Opaque White
Boiling point/range: Not determined
Autoignition temperature: No information available
Density: 8.26 lbs/gal 0.99 Kg/L
Partition coefficient (n-octanol/water): No information available
Solubility in other solvents: No information available
Elemental Phosphorus: 0 % by wt.
pH: 8.5
Dilution pH: 7.46 @ (1:14)

Bulk density: No information available
Evaporation Rate No information available
Specific gravity: 0.99
Odor: Surfactant
Melting point/range: Not determined
Decomposition temperature: Not determined
Flash point: > 200 °F > 93.4 °C
Solubility: Completely Soluble
Viscosity: No information available
VOC: 0 % *

Explosion limits: - upper: Not determined **- lower:** Not determined

* - Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 8.5, Article 2, Consumer Products, Sections 94508

10. STABILITY AND REACTIVITY

Stability: The product is stable
Polymerization: Hazardous polymerization does not occur.
Hazardous decomposition products: None reasonably foreseeable.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: Oral LD50 estimated to be greater than 5000 mg/kg Dermal LD50 estimated to be > 2000 mg/kg
Component Information: See Section 3.

Chronic toxicity: None known

Specific effects

Carcinogenic effects: None known
Mutagenic effects: None known
Reproductive toxicity: None known
Target organ effects: None known

12. ECOLOGICAL INFORMATION

Environmental Information: No data available.

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products:
Dispose of according to all federal, state and local applicable regulations.

14. TRANSPORT INFORMATION

DOT/TDG: Please refer to the Bill of Lading/receiving documents for up to date shipping information .

15. REGULATORY INFORMATION

International Inventories
All components of this product are listed on the following inventories: U.S.A. (TSCA), Canada (DSL/NDSL).

U.S. Regulations
California Proposition 65: This product is not subject to the reporting requirements under California's Proposition 65.

RIGHT TO KNOW (RTK)

Ingredient(s)	CAS #	MARTK:	NJRTK:	PARTK:	RIRTK:
Sodium dodecylbenzene sulfonate	25155-30-0	X	X	X	-
Alcohol ethoxylates	68439-46-3	-	-	-	-
Polymerized C>10 alpha olefin	68527-08-2	-	-	-	-
Water	7732-18-5	-	-	-	-

CERCLA/ SARA

Ingredient(s)	CAS #	Weight %	CERCLA/SARA RQ (lbs)	Section 302 TPQ (lbs)	Section 313
Sodium dodecylbenzene sulfonate	25155-30-0	1 - 5%	1000		

SARA 311/312 Hazard Categories

Immediate: X
Delayed: -
Fire: -
Reactivity: -
Sudden Release of Pressure: -

Canada

WHMIS hazard class: D2B Toxic materials

16. OTHER INFORMATION

Reason for revision:	Not applicable
Prepared by:	NAPRAC
Additional advice:	None.

Notice to Reader: This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained within. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Johnson wax PROFESSIONAL

Material Safety Data Sheet

SPITFIRE SC - USE SOLUTION

National Fire Protection Association (NFPA)

Fire Hazard

Health

Reactivity

Specific Hazard

Hazardous Material Information System (HMIS)

Health	2
Fire Hazard	0
Reactivity	0

Protective Clothing

Emergency Overview Red. Liquid. See Section 9.
CAUTION: May cause eye and skin irritation.

Section 1. Chemical Product and Company Identification

Product Name	**SPITFIRE SC - USE SOLUTION**	**Code**	Not available.
Product Use	Industrial/Institutional: Cleaning product.	**PMS#**	Not available.
MSDS#	113703/2-DIL	**Validation Date**	10/18/2000
		Print Date	10/18/2000
		Supersedes	4/19/2000.
		In Case of Emergency	(800) 851-7145

U.S. Headquarters
Johnson Wax Professional
8310 16th Street
Sturtevant, Wisconsin 53177-0902
Phone: (888) 352-2249
MSDS Internet Address:
www.jwp.com

Canadian Headquarters
Johnson Wax Professional
100 Matheson Blvd. East, Suite 203
Mississauga, Ontario L4Z 2G7
Phone: (905) 755-0913 or
(888) 746-5971

Section 2. Composition and Information on Ingredients

Ingredients	CAS #	% by Weight	Exposure Limits	LC50/LD50
2-Butoxyethanol	111-76-2	1-5	TWA: 120 (mg/m^3) from OSHA (PEL) [United States] TWA: 97 (mg/m^3) from ACGIH (TLV) [United States]	ORAL (LD50): Acute: 506 mg/kg [Rat]. DERMAL (LD50): Acute: 406 mg/kg [Rabbit]. VAPOR (LC50): Acute: 450 ppm 4 hours [Rat].
Propylene Glycol	57-55-6	1-5	Not available.	ORAL (LD50): Acute: 20000 mg/kg [Rat]. DERMAL (LD50): Acute: 20800 mg/kg [Rabbit].
Water	7732-18-5	60-100	Not available.	Not available.

Section 3. Hazards Identification

Routes of Entry Inhalation. Skin contact. Eye contact.

Potential Acute Health Effects

Eyes May be moderately irritating to eyes.

Skin May be moderately irritating to skin.

Inhalation May be irritating to nose, throat, and respiratory tract.

Ingestion May be irritating to mouth, throat and stomach.

Medical Conditions Aggravated by Overexposure: Persons with pre-existing skin disorders may be more susceptable to irritating effects.

See Toxicological Information (section 11)

Continued on Next Page

Section 4. First Aid Measures

Eye Contact	Flush immediately with plenty of water. If irritation persists, get medical attention.
Skin Contact	Flush immediately with plenty of water. If irritation persists, get medical attention.
Inhalation	If breathing is difficult: Remove to fresh air. Get medical attention.
Ingestion	Immediately drink plenty of water. Get medical attention.

Section 5. Fire Fighting Measures

Flammability of the Product	None known.
Flash Points	None.
Products of Combustion	None known.
Fire Fighting Media and Instructions	Extinguish with water spray or carbon dioxide, dry chemical powder or appropriate foam. Normal fire fighting procedure may be used.
Special Remarks on Fire and Explosion Hazards	None known.

Section 6. Accidental Release Measures

Personal Precautions	Put on appropriate personal protective equipment (see Section 8).
Environmental Precautions and Clean-up Methods	In the event of major spillage: Use appropriate containment to avoid environmental contamination. Sweep or scrape up material. Place in suitable clean, dry containers for disposal by approved methods. Use a water rinse for final clean-up.

Section 7. Handling and Storage

Handling	Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. FOR INDUSTRIAL USE ONLY
Storage	Store in a dry, cool and well-ventilated area. Protect from freezing. KEEP OUT OF REACH OF CHILDREN.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	No special ventilation requirements. General room ventilation is adequate.
Personal Protection	
Eyes	Safety glasses recommended.
Hands	No special requirements under normal use conditions. For prolonged or repeated contact with skin: Rubber gloves.
Respiratory	No special requirements under normal use conditions.
Feet	No special requirements under normal use conditions.
Body	If major exposure is possible, wear suitable protective clothing.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Liquid.
Odor	Fresh.
Color	Red.
pH	11.9 [Basic.]
Specific Gravity	1
Boiling/Condensation Point	100°C (212°F)
Melting/Freezing Point	0°C (32°F)
Solubility in water	Complete.

Continued on Next Page

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Conditions of Instability	None known.
Incompatibility with Various Substances	Do not mix with any other chemicals or products unless specified by label.
Hazardous Decomposition Products	When exposed to fire: Produces normal products of combustion.
Hazardous Polymerization	Will not occur.

Section 11. Toxicological Information

Acute toxicity	ORAL (LD50) Estimated to be greater than 5000 mg/kg (rat).
Effects of Chronic Exposure	None known.
Other Toxic Effects	None known.

Section 12. Ecological Information

Not available.

Section 13. Disposal Considerations

Waste Information	No special precautions. Dispose of according to all federal, state and local regulations.

Section 14. Transport Information

DOT Classification

Not regulated

TDG Classification

Not regulated

Section 15. Regulatory Information

Reporting in this section is based on ingredients disclosed in Section 2

US Regulations

Federal	CERCLA: Hazardous substances.: 2-Butoxyethanol
State	New Jersey spill list: 2-Butoxyethanol New Jersey: 2-Butoxyethanol Massachusetts spill list: 2-Butoxyethanol Massachusetts RTK: 2-Butoxyethanol Pennsylvania RTK: Propylene Glycol, 2-Butoxyethanol This product is not subject to the reporting requirements under California's Proposition 65.
Registered Product Information	Not applicable.

Canadian Regulations

Canadian NPRI	Canadian NPRI: 2-Butoxyethanol.
WHMIS Classification	Not applicable.
WHMIS Icon	
Registered Product Information	Not applicable.
Chemical Inventory Status	All ingredients of this product are listed or are excluded from listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

Continued on Next Page

Section 16. Other Information

Other Special Considerations	Not available.
Version	1.01

Notice to Reader

This document has been prepared using data from sources considered technically reliable. It does not constitute a warranty, express or implied, as to the accuracy of the information contained within. Actual conditions of use and handling are beyond seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Safety Data Sheet
Spartan Chemical Company, Inc.

Revision Date: 31-Jul-2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name: **SPRAYBUFF**
Product Number: 4440 , 3040
Recommended Use: Cleaning agent
Uses Advised Against: For Industrial and Institutional Use Only

Manufacturer/Supplier: Spartan Chemical Company, Inc.
1110 Spartan Drive
Maumee, Ohio 43537 USA
800-537-8990 (Business hours)
www.spartanchemical.com

24 Hour Emergency Phone Numbers:
Medical Emergency/Information: 888-314-6171
Transportation/Spill/Leak: CHEMTREC 800-424-9300

2. HAZARDS IDENTIFICATION

GHS Classification
Not Classified Not dangerous according to the Globally Harmonized System (GHS)

GHS Label Elements
Signal Word: **No signal word**
Symbols: None
Hazard Statements: No hazard statements
Precautionary Statements:
Prevention: Not Applicable
Response:
-Specific Treatment: See Safety Data Sheet Section 4: "FIRST AID MEASURES" for additional information.

Storage: Not Applicable
Disposal: Not Applicable

Hazards Not Otherwise Classified: Not Applicable

Other Information:
- May cause skin irritation.
- May cause eye irritation.
- May be harmful if swallowed.
- Inhalation of vapors or mist may cause respiratory irritation.
- Keep out of reach of children.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
water	7732-18-5	60-100
ethylene-acrylic acid copolymer	9010-77-9	1-5

Specific chemical identity and/or exact percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

-Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

-Skin Contact: Wash with soap and water. If skin irritation occurs: Get medical attention.

-Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison control center or physician if you feel unwell.

-Ingestion: Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if you feel unwell.

Note to Physicians: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Product does not support combustion, Use extinguishing agent suitable for type of surrounding fire

Specific Hazards Arising from the Chemical: Dried product is capable of burning. Combustion products are toxic.

Hazardous Combustion Products: May include Carbon monoxide Carbon dioxide and other toxic gases or vapors.

Protective Equipment and Precautions for Firefighters: Wear MSHA/NIOSH approved self-contained breathing apparatus (SCBA) and full protective gear. Cool fire-exposed containers with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

Environmental Precautions: Do not rinse spill onto the ground, into storm sewers or bodies of water.

Methods for Clean-Up: Prevent further leakage or spillage if safe to do so. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

7. HANDLING AND STORAGE

Advice on Safe Handling: Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

Storage Conditions: Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep from freezing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits: None established.

Engineering Controls: Provide good general ventilation.
If work practices generate dust, fumes, gas, vapors or mists which expose workers to chemicals above the occupational exposure limits, local exhaust ventilation or other engineering controls should be considered.

Personal Protective Equipment

Eye/Face Protection: Not required with expected use.

Skin and Body Protection: Not required with expected use.

Respiratory Protection: Not required with expected use.
If occupational exposure limits are exceeded or respiratory irritation occurs, use of a NIOSH/MSHA approved respirator suitable for the use-conditions and chemicals in Section 3 should be considered.

General Hygiene Considerations: Wash hands and any exposed skin thoroughly after handling.
See 29 CFR 1910.132-138 for further guidance.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Physical State:	Liquid
Color:	Light blue
Odor:	Mild
pH:	9.5-10.5
Melting Point / Freezing Point:	No information available.
Boiling Point / Boiling Range:	100 °C / 212 °F
Flash Point:	> 100 °C / > 212 °F ASTM D56
Evaporation Rate:	< 1 (BuAc = 1)
Flammability (solid, gas)	No information available.
Upper Flammability Limit:	No information available.
Lower Flammability Limit:	No information available.
Vapor Pressure:	No information available.
Vapor Density:	No information available.
Specific Gravity:	1.003
Solubility(ies):	Miscible in water
Partition Coefficient:	No information available.
Autoignition Temperature:	No information available.
Decomposition Temperature:	No information available.
Viscosity:	No information available.

10. STABILITY AND REACTIVITY

Reactivity: This material is considered to be non-reactive under normal conditions of use.
Chemical Stability: Stable under normal conditions.
Possibility of Hazardous Reactions: Not expected to occur with normal handling and storage.
Conditions to Avoid: Extremes of temperature and direct sunlight.
Incompatible Materials: Strong oxidizing agents. Strong acids.
Hazardous Decomposition Products: May include carbon monoxide, carbon dioxide (CO2) and other toxic gases or vapors.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Eyes, Skin, Ingestion, Inhalation.
Symptoms of Exposure:
-Eye Contact: Pain and redness.
-Skin Contact: Drying of the skin.
-Inhalation: Nasal discomfort and coughing.
-Ingestion: Pain, nausea, vomiting and diarrhea.
Immediate, Delayed, Chronic Effects
Product Information: Data not available or insufficient for classification.

Numerical Measures of Toxicity
The following acute toxicity estimates (ATE) are calculated based on the GHS document.
Data not available or insufficient for classification.

Component Acute Toxicity Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
water 7732-18-5	> 90 mL/kg (Rat)	Not Available	Not Available

Carcinogenicity: No components present at 0.1% or greater are listed as to being carcinogens by ACGIH, IARC, NTP or OSHA.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Persistence and Degradability: No information available.

Bioaccumulation: No information available.

Other Adverse Effects: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal of Wastes: Dispose of in accordance with federal, state and local regulations.
Contaminated Packaging: Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT: Not Regulated
Proper Shipping Name: Non-Hazardous Products
Special Provisions: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Check with a trained hazardous materials transportation expert for information specific to your situation.

IMDG: Not Regulated
Proper Shipping Name: Non-Hazardous Products

15. REGULATORY INFORMATION

TSCA Status: (Toxic Substance Control Act Section 8(b) Inventory)
All chemical substances in this product are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

SARA 313
This product does not contain listed substances above the "de minimus" level

SARA 311/312 Hazard Categories

Acute Health Hazard:	Yes
Chronic Health Hazard:	No
Fire Hazard:	No
Sudden release of pressure hazard:	No
Reactive Hazard:	No

California Proposition 65
This product is not subject to warning requirements under California Proposition 65.

16. OTHER INFORMATION

NFPA	**Health Hazards:** 1	**Flammability:** 0	**Instability:** 0	**Special:** N/A
HMIS	**Health Hazards:** 1	**Flammability:** 0	**Physical Hazards:** 0	

Revision Date: 31-Jul-2015
Reasons for Revision: Section 14 and 15

Disclaimer:
The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

MATERIAL SAFETY DATA SHEET

SPRAYPAK GUM REMOVER

1. Product And Company Identification

Supplier
Chase Products Co.
19th and Gardner Road
Broadview, IL 60155 USA

Company Contact: Aludia B. Hernandez
Telephone Number: 708-865-1000
FAX Number: 708-865-0923
E-Mail: sales@chaseproducts.com
Web Site: www.chaseproducts.com

Manufacturer
Chase Products Co.
19th and Gardner Road
Broadview, IL 60155 USA

Company Contact: Aludia B. Hernandez
Telephone Number: 708-865-1000
FAX Number: 708-865-0923
E-Mail: sales@chaseproducts.com
Web Site: www.chaseproducts.com

Supplier Emergency Contacts & Phone Number
Chem-Tel: 1-800-255-3924

Manufacturer Emergency Contacts & Phone Number
Chem-Tel: 1-800-255-3924

Issue Date: 06/27/2002

Product Name: SPRAYPAK GUM REMOVER
Chemical Name: 5-5615
CAS Number: Not Established
MSDS Number: 1579
Product Code: 433-4107-1
Product/Material Uses - Chewing Gum Remover

2. Composition/Information On Ingredients

Ingredient Name	CAS Number		Percent Of Total Weight
ISOBUTANE	75-28-5		
PROPANE	74-98-6		

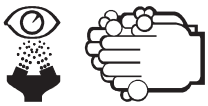
3. Hazards Identification

Primary Routes(s) Of Entry - Ingestion (possible, but considered unlikely), eye contact, skin contact, inhalation.
Eye Hazards - Can cause severe eye irritation, redness, tearing and possible freeze burns.
Skin Hazards - Prolonged contact with the skin may cause severe freeze burns.
Ingestion Hazards - This is an aerosol product, ingestion is unlikely to occur.
Inhalation Hazards - Over inhalation of vapor or mist may produce anesthetic effects, headache and dizziness.
Chronic/Carcinogenicity Effects - Not known, chronic effects based on available data. None of the ingredients on this product are listed as carcinogenic by NTP, IARC or OSHA
Epidemiology - None known
Teratogenicity (Birth Defects) - None known
Reproductive Effects - None known
Neurotoxicity - None known
Mutagenicity (Genetic Effect) - None known
Signs And Symptoms - Acute: Over inhalation of vapor or mist may cause anesthetic effects, headaches, dizziness and nausea. Prolonged contact with skin may cause severe freeze burns. Can cause severe eye irritation, redness, tearing and possible freeze burns.
Conditions Aggravated By Exposure - May aggravate pre-existing skin and respiratory disorders.
Conditions Aggravated By Overexposure - May aggravate pre-existing skin and respiratory disorders.

MATERIAL SAFETY DATA SHEET

SPRAYPAK GUM REMOVER

First Aid (Pictograms)



4. First Aid Measures

Eye - Flush from eyes with plenty of water. Consult physician if injury develops.
Skin - Wash skin with soap and water. Consult physician if injury develops.
Ingestion - Ingestion from an aerosol product is unlikely to occur.
Inhalation - If overcome by vapor, move victim to fresh air. Restore respiration if necessary. Get medical attention if injury develops.

5. Fire Fighting Measures

Flash Point: -156 °F
Flash Point Method: estimated
Lower Explosive Limit: 1.9% (vol) gas in air
Upper Explosive Limit: 9.5% (vol) gas in air

Fire And Explosion Hazards - Vapors are havier than air and may travel along the ground and be ignite by pilot lights, other flames, sparks, heaters, smoking or other ignition sources.
Extinguishing Media - Dry chemical extinguisher (B-C), water.
Fire Fighting Instructions - Stop the release of material if possible. Water spray may be used to cool cans in the vicinity of fire or excessive heat. Remove personnel in general area.

6. Accidental Release Measures

Provide adequate ventilation to area being treated. Avoid sources of ignition.

7. Handling And Storage

Handling And Storage Precautions - Store in a cool, dry place away from heat and open flame.
Handling Precautions - Do not deliberately inhale vapor or spray mist. Avoid getting spray into eyes. Avoid contact with skin. Keep out of reach of children.
Storage Precautions - Keep away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors and static electricity). **AEROSOL STORAGE LEVEL III (NFPA-30B)**
Work/Hygienic Practices - Wash thoroughly after handling.

8. Exposure Controls/Personal Protection

Engineering Controls - Use with adequate general and local exhaust ventilation.
Eye/Face Protection - Conventional eyeglasses to guard against splashing.
Skin Protection - Household type gloves, required.
Respiratory Protection - Use in well-ventilated area ONLY. When using indoors, keep windows and doors open until fumes disipate.

Ingredient(s) - Exposure Limits
PROPANE
ACGIH TLV-TWA 2500 ppm ; OSHA PEL-TWA 1,000 ppm

9. Physical And Chemical Properties

Appearance - Not visible vapor.
Odor - Sweet, petroleum odor.

Chemical Type: Mixture
Physical State: Gas

9. Physical And Chemical Properties - Continued

Melting Point: Not applicable °F Not applicable °C
Boiling Point: -6.4 to 10.9 °F
Specific Gravity: 0.555
Percent VOCs: 100
Vapor Pressure: 46psig
Solubility: 0.008%
Evaporation Rate: Immediate

10. Stability And Reactivity

Stability: Stable
Hazardous Polymerization: Will not occur

Conditions To Avoid (Stability) - Temperatures above 120 F
Incompatible Materials - Avoid heat and open flame.
Hazardous Decomposition Products - Thermal decomposition may yield gases like carbon monoxide and carbon dioxide.
Conditions To Avoid (Polymerization) - Temperatures above 120 F

11. Toxicological Information

No Data Available...

12. Ecological Information

No Data Available...

13. Disposal Considerations

Mechanical recovery. Flare-off at safe locations (vapors). Exhaust to atmosphere in safe location (no open flames). Wrap empty container in newspaper and dispose of it in non-incinerated trash only.

14. Transport Information

Proper Shipping Name - ORM-D Consumer Commodity

DOT Identification Number
UN1950

DOT Shipping Label
Aerosol Consumer Commodity

15. Regulatory Information

U.S. Regulatory Information - All ingredients of this product are listed or are excluded from listing under the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

SARA Hazard Classes
Acute Health Hazard

SARA Section 313 Notification - This product does not contain any ingredients regulated under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 or 40 CFR 372.

Ingredient(s) - State Regulations
ISOBUTANE
New Jersey - Workplace Hazard; New Jersey - Environmental Hazard; New Jersey - Special Hazard; Pennsylvania -

15. Regulatory Information - Continued

Ingredient(s) - State Regulations - Continued

Workplace Hazard; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

PROPANE

New Jersey - Workplace Hazard; New Jersey - Environmental Hazard; New Jersey - Special Hazard; Pennsylvania - Workplace Hazard; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

NFPA

HMIS

HEALTH	1
FLAMMABILITY	4
REACTIVITY	1
PERSONAL PROTECTION	B

16. Other Information

Revision/Preparer Information

MSDS Preparer: Laura E. Radevski

MSDS Preparer Phone Number: 708-865-1000

This MSDS Supercedes A Previous MSDS Dated: 05/19/2001

Disclaimer

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitablility of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purposes(s).

Chase Products Co.

Printed Using MSDS Generator™ 2000

Safety Data Sheet

Issue date 24-Jun-2015 **Version** 1

1. Identification of the Substance/Preparation and of the Company/Undertaking

Product Identifier

Product name	SPRAYPAK SPRAY DISINFECTANT
Chemical name	7-9761-1

Other means of identification

Product code	FG 433-4104-4
Synonyms	Disinfectant Spray
Registration number(s)	498-179

Recommended use of the chemical and restrictions on use

Recommended Use	For disinfection of hard, non-porous, inanimate surfaces.
Uses advised against	Do not spray on varnished, painted or plastic surfaces.

Details of the supplier of the safety data sheet

Supplier Address
Chase Products Co.
2727 Gardner Road
Broadview, IL 60155
708-273-1121

Manufacturer Address
Chase Products Co.
2727 Gardner Road
Broadview, IL 60155
708-273-1121

Emergency Telephone Number

Company Phone Number	708-865-1000
24 Hour Emergency Phone Number	1-800-255-3924
Emergency telephone	ChemTel 1-800-255-3924

2. Hazards Identification

Classification

Serious eye damage/eye irritation	Category 2A
FLAMMABLE AEROSOLS	Category 2
Gases Under Pressure	liquefied gas

Label Elements

EMERGENCY OVERVIEW

Warning

hazard statements
Causes serious eye irritation
Flammable Aerosol
Contains gas under pressure; may explode if heated

Appearance Hazy, yellow liquid **Physical State** Aerosol **Odor** Perfumed.

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves, protective clothing, eye protection and face protection.
Keep away from heat, sparks, open flames and hot surfaces. — No smoking
Pressurized container: Do not pierce or burn, even after use
Do not spray on an open flame or other ignition source

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention

Precautionary Statements - Storage
Protect from sunlight. Store in a well-ventilated place
Do not expose to temperatures exceeding 122 °F (50 °C)

Hazards not otherwise classified (HNOC)
Other Information
• Toxic to aquatic life with long lasting effects
0.69% of the mixture consists of ingredient(s) of unknown toxicity

3. Composition/information on Ingredients

Synonyms Disinfectant Spray.
Chemical Family MIXTURES.
Formula 7-9761-1
Chemical nature Aqueous solution of alcohol and other active ingredients.

Chemical name	CAS No	weight-%	Trade secret
Water	7732-18-5	45-50	*
Ethyl alcohol	64-17-5	30-35	*
N-Butane	106-97-8	10-15	*
Propane	74-98-6	1-5	*

Chemical Additions **See label for active ingredients information.**

* The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First aid measures

FIRST AID MEASURES

Eye Contact Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Skin contact Wash with soap and water. If irritation develops, consult a physician .

inhalation If overcome by vapor, move person to fresh air.

INGESTION Ingestion from an aerosol product is unlikely to occur.

Most important symptoms and effects, both acute and delayed

Symptoms Acute, Deliberate inhalation of concentrated vapor or mist may cause headaches. Prolonged and repeated contact with the eyes may cause mild irritation.

Indication of any immediate medical attention and special treatment needed

Note to physicians None needed.

5. Fire-fighting measures

Suitable extinguishing media
Dry chemical, CO2 or water spray.

Unsuitable extinguishing media Use water spray or fog; do not use straight streams.

Specific hazards arising from the chemical
Containers are under pressure. Temperatures above 130 °F may cause cans to burst.

Hazardous combustion products Thermal decomposition may yield gases like carbon monoxide and carbon dioxide.

Explosion data
Sensitivity to Mechanical Impact Contents under pressure, keep away from heat and open flame.
Sensitivity to Static Discharge Keep away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors and static electricity).

Protective equipment and precautions for firefighters
Use personal protective equipment as required.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions CONTENTS UNDER PRESSURE. Do not puncture or incinerate cans.

Other Information Keep out of reach of children.

Environmental Precautions

Environmental Precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for Containment Provide adequate ventilation to area being treated. Soak up spills with chemically inert, absorbent material.

Methods for cleaning up Clean contaminated surface thoroughly.

7. Handling and Storage

Precautions for safe handling

Advice on safe handling Avoid getting spray into eyes. Keep out of reach of children.

Conditions for safe storage, including any incompatibilities

Storage Conditions Store in a cool, dry place away from heat and open flame. Avoid storing at below-freezing temperatures. **AEROSOL STORAGE LEVEL I (NFPA-30B) .**

Incompatible Materials Avoid heat, open flame and contact with strong oxidizers.

8. Exposure Controls/Personal Protection

Control parameters

Exposure guidelines See occupational exposure limits listed below.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethyl alcohol 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m^3 (vacated) TWA: 1000 ppm	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m^3

		(vacated) TWA: 1900 mg/m³	
N-Butane 106-97-8	STEL: 1000 ppm	(vacated) TWA: 800 ppm (vacated) TWA: 1900 mg/m³	TWA: 800 ppm TWA: 1900 mg/m³
Propane 74-98-6	TWA: 1000 ppm	TWA: 1000 ppm TWA: 1800 mg/m³ (vacated) TWA: 1000 ppm (vacated) TWA: 1800 mg/m³	IDLH: 2100 ppm TWA: 1000 ppm TWA: 1800 mg/m³

Appropriate engineering controls

Engineering controls Use with adequate general or local exhaust ventilation.

Individual protection measures, such as personal protective equipment

Eye/face Protection Conventional eyeglasses to guard against splashing.

Skin and Body Protection Household type gloves, if desired.

Respiratory protection None required if used in a well-ventilated area .

General hygiene considerations None required.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical State Aerosol
Appearance Hazy, yellow liquid
Color clear
Odor Perfumed.
Odor threshold No information available

Property	Values	Remarks • Method
pH	10.5 +/- 0.5	No information available
Melting point/freezing point	NA	No information available
Boiling point/boiling range	212 °F/100 °C	No information available
Flash Point	Not avaliable. This is an aerosol product for which Flame Projection is 6-8 inches without flashback. Temperatures above 120 F may cause cans to burst.	No information available
Evaporation Rate	Faster than butyl acetate	No information available
Flammability (solid, gas)		No information available
Flammability Limits in Air		No information available
Upper flammability limits	Not available	
Lower Flammability Limit	Not available	
Vapor pressure	Not available	No information available
Vapor Density		No information available
Relative Density	0.92 concentrate	No information available
Water solubility	completely soluble	No information available
Solubility in other solvents		No information available
Partition coefficient		No information available
Autoignition Temperature		No information available
Decomposition temperature		No information available
Kinematic viscosity		No information available
Dynamic viscosity		No information available
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point No information available
Molecular weight No information available
VOC content (%) 51.32%
Density No information available

Bulk Density 8.33 Lb/gal

10. Stability and Reactivity

Reactivity
Not applicable
no data available

Chemical stability
Stable.
Possibility of hazardous reactions
Temperatures above 130 °F may cause cans to burst with force.
hazardous polymerization Hazardous polymerization does not occur.

Conditions to Avoid
Temperatures above 122 °F (50 °C).
Incompatible Materials
Avoid heat, open flame and contact with strong oxidizers.
Hazardous decomposition products
Thermal decomposition may yield gases like carbon monoxide and carbon dioxide.

11. Toxicological Information

Information on likely routes of exposure

Product Information Acute: Prolonged inhalation of concentrated vapor or mist may cause headaches, dizziness and nausea. Prolonged and repeated contact with skin may cause irritation and reddening. Contact with eyes causes irritation.

inhalation See data below.

Eye Contact no data available.

Skin contact no data available.

INGESTION This is an aerosol product, ingestion is unlikely to occur. MAY BE HARMFUL IF SWALLOWED.

Chemical name	Oral LD50	dermal LD50	Inhalation LC50
Water 7732-18-5	> 90 mL/kg (Rat)	-	-
Ethyl alcohol 64-17-5	= 7060 mg/kg (Rat)	-	= 124.7 mg/L (Rat) 4 h
N-Butane 106-97-8	-	-	= 658 g/m³ (Rat) 4 h
Propane 74-98-6	-	-	= 658 mg/L (Rat) 4 h

Information on toxicological effects

Symptoms See information above.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

sensitization No information available.
Germ Cell Mutagenicity No information available.
carcinogenicity Not known chronic effects based on available information.

Reproductive Toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Aspiration Hazard No information available.

Numerical measures of toxicity - Product Information

Unknown acute toxicity 0.69% of the mixture consists of ingredient(s) of unknown toxicity
The following values are calculated based on chapter 3.1 of the GHS document .
ATEmix (inhalation-gas) 10000000
ATEmix (inhalation-vapor) 16447.4 mg/l

12. Ecological Information

ecotoxicity

20.99% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Ethyl alcohol 64-17-5		12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 100: 96 h Pimephales promelas mg/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through	EC50 = 34634 mg/L 30 min EC50 = 35470 mg/L 5 min	9268 - 14221: 48 h Daphnia magna mg/L LC50 2: 48 h Daphnia magna mg/L EC50 Static 10800: 24 h Daphnia magna mg/L EC50

Persistence and degradability
No information available.

Bioaccumulation
See information below.

Chemical name	Partition coefficient
Ethyl alcohol 64-17-5	-0.32
N-Butane 106-97-8	2.89
Propane 74-98-6	2.3

Other adverse effects No information available

13. Disposal Considerations

Waste treatment methods

Disposal of wastes Do not puncture or incinerate container. If empty: Place in trash or offer for recycling if available. If partly filled: Call your local solid waste agency for disposal instructions.

Contaminated packaging Pressurized container: Do not pierce or burn, even after use.

Chemical name	California Hazardous Waste Status
Ethyl alcohol 64-17-5	Toxic Ignitable

14. Transport Information

Note: The following information is for aerosols with less than 17 oz net weight when shipped by road.

DOT Consumer Commodity
UN/ID no Limited Quantity
Proper Shipping Name Consumer Commodity

Hazard Class ORM-D

ICAO (air) The following information is for aerosols less than 17 oz net weight when shipped by air.
UN/ID no ID8000
Proper Shipping Name Consumer Commodity or Limited Quantity
Hazard Class 9 (packaging instructions Y963)

15. Regulatory information

International Inventories

TSCA All ingredients of this product are listed or are excluded from listing under the U.S. Toxic Subtances Control Act (TSCA) Chemical Substance Inventory.

DSL All ingredients are listed or are excluded from listing on the DSL.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313
This product does not contain toxic chemicals (above the de minimis level) subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	yes
Chronic Health Hazard	No
Fire Hazard	yes
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Water 7732-18-5			X
Ethyl alcohol 64-17-5	X	X	X
N-Butane 106-97-8	X	X	X
Propane 74-98-6	X	X	X

U.S. EPA Label information

EPA Pesticide registration number 498-179

EPA Statement

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label: CAUTION: May cause eye irritation. Avoid contact with the eyes and skin. Avoid breathing of spray mist. Avoid contamination of foodstuff.

16. Other information

NFPA	**Health Hazards** 1	**Flammability** 1	**Instability** 1	**Physical and chemical properties** Not applicable
HMIS	**Health Hazards** 1	**Flammability** 2	**Physical Hazards** 1	**Personal Protection** A - Eyes protection

Prepared by Regulatory Department
Issue date 24-Jun-2015
Revision note
This SDS supersedes a previous MSDS dated January 17, 2011.

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

MATERIAL SAFETY DATA SHEET

SPRAYPAK STAINLESS STEEL CLEANER

1. Product And Company Identification

Supplier	Manufacturer
Chase Products Co. **19th and Gardner Road** **Broadview, IL 60155 USA** **Company Contact:** Aludia B. Hernandez **Telephone Number:** 708-865-1000 **FAX Number:** 708-865-0923 **E-Mail:** sales@chaseproducts.com **Web Site:** www.chaseproducts.com	**Chase Products Co.** **19th and Gardner Road** **Broadview, IL 60155 USA** **Company Contact:** Aludia B. Hernandez **Telephone Number:** 708-865-1000 **FAX Number:** 708-865-0923 **E-Mail:** sales@chaseproducts.com **Web Site:** www.chaseproducts.com
Supplier Emergency Contacts & Phone Number **Chem-Tel: 1-800-255-3924**	**Manufacturer Emergency Contacts & Phone Number** **Chem-Tel: 1-800-255-3924**

Issue Date: 09/20/2004

Product Name: SPRAYPAK STAINLESS STEEL CLEANER
Chemical Name: 7-7700-1
CAS Number: Not Established
MSDS Number: 2691
Product Code: 433-4111-2
Product/Material Uses - Stainless Steel Cleaner

2. Composition/Information On Ingredients

Ingredient Name	CAS Number		Percent Of Total Weight
ISOBUTANE	75-28-5		
PETROLEUM HYDROCARBON (Light naphthenic distillate)	64742-53-6		
PROPANE	74-98-6		

This product may also contain Heavy Naphthenic Distillate (CAS# 64742-52-5). Hazardous components, according to OSHA, are listed when present at 1.0% or greater. Carcinogens are listed when present at 0.1% or greater.

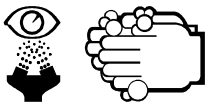
3. Hazards Identification

Primary Routes(s) Of Entry - Ingestion (possible, but considered unlikely), eye contact, inhalation.
Eye Hazards - May cause irritation after contact with the eyes.
Skin Hazards - Prolonged and repeated contact with skin may result on irritation.
Ingestion Hazards - This is an aerosol product, ingestion is unlikely to occur.
Inhalation Hazards - Deliberate inhalation of concentrate vapor or mist may cause headaches, dizziness and nausea.
Chronic/Carcinogenicity Effects - Not known, chronic effects based on available data. None of the ingredients on this product are listed as carcinogenic by NTP, IARC or OSHA.
Teratogenicity (Birth Defects) - Not known
Reproductive Effects - Not known
Neurotoxicity - Not known
Mutagenicity (Genetic Effect) - Not known
Signs And Symptoms - Acute: Deliberate inhalation of concentrate vapor or mist may cause headaches, dizziness and nausea. Contact with the eyes may cause irritation. Prolonged and repeated contact with the skin may result on irritation.
Conditions Aggravated By Exposure - Pre-existing skin and respiratory disorders.
Conditions Aggravated By Overexposure - Pre-existing skin and respiratory disorders.

M A T E R I A L S A F E T Y D A T A S H E E T

SPRAYPAK STAINLESS STEEL CLEANER

First Aid (Pictograms)



4. First Aid Measures

Eye - Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
Skin - Wash skin with soap and water. If irritation develops, consult a physician.
Ingestion - Ingestion from an aerosol product is unlikely to occur. Contains petroleum distillates. Harmful if swallowed. If accidentally swallowed, do not induce vomiting, call physician immediately.
Inhalation - If overcome by vapor move victim to fresh air. If person is not breathing, call 911 or an ambulance, then provide artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advise.

5. Fire Fighting Measures

Flash Point: Not available °F Not available °C
Flash Point Method: Not available
Lower Explosive Limit: Not available
Upper Explosive Limit: Not available

Fire And Explosion Hazards - This product is an aerosol product for which **Flame Projection is 2 to 3 inches, without flashback.** Temperatures above 120 F may cause cans to burst.
Extinguishing Media - Use CO2 (Carbon Dioxide), dry chemical, or water fog.
Fire Fighting Instructions - Water spray may be used to cool cans in the vicinity of fire or excessive heat.

6. Accidental Release Measures

Provide adequate ventilation to area being treated. Soak up spills with chemically inert, absorbent material.

7. Handling And Storage

Handling And Storage Precautions - Store in a cool, dry place away from heat and open flame.
Handling Precautions - Do not deliberately inhale vapor or spray mist. Avoid getting spray into eyes. Keep out of reach of children.
Storage Precautions - Keep away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors and static electricity). **AEROSOL STORAGE LEVEL I (NFPA-30B)**
Work/Hygienic Practices - Wash hands thoroughly after using this product.

Protective Clothing (Pictograms)

8. Exposure Controls/Personal Protection

Engineering Controls - Use with adequate general and local exhaust ventilation.
Eye/Face Protection - Conventional eyeglasses to guard against splashing.
Skin Protection - Household type gloves.
Respiratory Protection - None required if used in a well-ventilated area.

Ingredient(s) - Exposure Limits
PETROLEUM HYDROCARBON (Light naphthenic distillate)
OSHA PEL 5mg/m3 for oil mist in air ; ACGIH TLV 5mg/m3 for oil mist in air

8. Exposure Controls/Personal Protection - Continued

Ingredient(s) - Exposure Limits - Continued
PROPANE
ACGIH TLV-TWA 2500 ppm ; OSHA PEL-TWA 1,000 ppm

9. Physical And Chemical Properties

Appearance - White liquid.
Odor - Perfumed.

Chemical Type: Mixture
Physical State: Liquid
Melting Point: Not applicable °F Not applicable °C
Boiling Point: water 212 °F water 100 °C
Specific Gravity: 0.96 concentrate
Percent VOCs: 10.0
pH Factor: 10.1
Solubility: Soluble
Evaporation Rate: Faster than butyl acetate

10. Stability And Reactivity

Stability: Stable
Hazardous Polymerization: Will not occur

Conditions To Avoid (Stability) - Temperatures above 120 F
Incompatible Materials - Avoid heat, open flame and contact with strong oxidizers.
Hazardous Decomposition Products - Thermal decomposition may yield gases like carbon monoxide and carbon dioxide.
Conditions To Avoid (Polymerization) - Temperatures above 120 F

11. Toxicological Information

No Data Available...

12. Ecological Information

No Data Available...

13. Disposal Considerations

Do not puncture or incinerate container. **If empty:** Place in trash or offer for recycling if available. **If partly filled:** Call your local solid waste agency for disposal instructions.

14. Transport Information

Proper Shipping Name - ORM-D Consumer Commodity

Hazard Class
2.1

DOT Identification Number
UN1950

DOT Shipping Label
Aerosol Consumer Commodity

15. Regulatory Information

U.S. Regulatory Information - All ingredients of this product are listed or are excluded from listing under the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

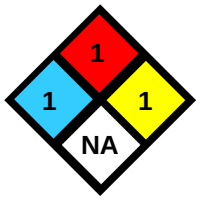
SARA Hazard Classes
Acute Health Hazard

SARA Section 313 Notification - This product does not contain any ingredients regulated under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 or 40 CFR 372.

Ingredient(s) - State Regulations
ISOBUTANE
New Jersey - Workplace Hazard; New Jersey - Environmental Hazard; New Jersey - Special Hazard; Pennsylvania - Workplace Hazard; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

PROPANE
New Jersey - Workplace Hazard; New Jersey - Environmental Hazard; New Jersey - Special Hazard; Pennsylvania - Workplace Hazard; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

NFPA



HMIS

HEALTH	1
FLAMMABILITY	1
REACTIVITY	1
PERSONAL PROTECTION	A

16. Other Information

Revision/Preparer Information
MSDS Preparer: Laura E. Radevski
MSDS Preparer Phone Number: 708-865-1000
This MSDS Supercedes A Previous MSDS Dated: 12/18/2003

Disclaimer

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitablility of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purposes(s).

Chase Products Co.

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Safety Data Sheet

Issue date 12-Mar-2015 **Version** 1

1. Identification of the Substance/Preparation and of the Company/Undertaking

Product Identifier

Product name SPRAYPAK VANDAL MARK REMOVER
Chemical name 7-7785-3

Other means of identification

Product code FG 433-4105-8
Synonyms Graffiti Remover

Recommended use of the chemical and restrictions on use

Recommended Use Vandal mark remover.
Uses advised against Do not use to clean glass or wood surfaces. DO NOT USE ON FLOORS

Details of the supplier of the safety data sheet

Supplier Address
Chase Products Co.
2727 Gardner Road
Broadview, IL 60155
708-273-1121

Manufacturer Address
Chase Products Co.
2727 Gardner Road
Broadview, IL 60155
708-273-1121

Emergency Telephone Number

Company Phone Number 708-865-1000
24 Hour Emergency Phone Number 1-800-255-3924
Emergency telephone ChemTel 1-800-255-3924

2. Hazards Identification

Classification

Acute toxicity - Inhalation (Gases)	Category 3
Acute toxicity - Inhalation (Vapors)	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1
Germ Cell Mutagenicity	Category 1B
carcinogenicity	Category 1B
Reproductive Toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2
Aspiration toxicity	Category 1
FLAMMABLE AEROSOLS	Category 1
Gases Under Pressure	liquefied gas

Label Elements

EMERGENCY OVERVIEW

DANGER

hazard statements
Toxic if inhaled
CAUSES SKIN IRRITATION
Causes serious eye irritation
May cause an allergic skin reaction
May cause genetic defects

May cause cancer
Suspected of damaging fertility or the unborn child
May cause respiratory irritation. May cause drowsiness or dizziness
May cause damage to organs through prolonged or repeated exposure
May be fatal if swallowed and enters airways
EXTREMELY FLAMMABLE AEROSOL
Pressurized container: May burst if heated
Contains gas under pressure; may explode if heated

Appearance Dark yellow to light green liquid | **Physical State** Aerosol | **Odor** Petroleum distillates

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Do not eat, drink or smoke when using this product
Use personal protective equipment as required
Wear protective gloves, protective clothing, eye protection and face protection.
Use only outdoors or in a well-ventilated area
Wash face, hands and any exposed skin thoroughly after handling
Contaminated work clothing should not be allowed out of the workplace
Do not breathe fumes, mist, vapors or spray.
Keep away from heat, sparks, open flames and hot surfaces. — No smoking
Pressurized container: Do not pierce or burn, even after use
Do not spray on an open flame or other ignition source

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
Specific treatment: See additional cautionary statements on this label.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing and wash before reuse
If skin irritation or rash occurs: Get medical advice/attention
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician
IF SWALLOWED: Immediately call a POISON CENTER or doctor.
Do NOT induce vomiting

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Other Information
• Harmful to aquatic life with long lasting effects
• MAY BE HARMFUL IF SWALLOWED
• May be harmful in contact with skin
• Toxic to aquatic life with long lasting effects
-

3. Composition/information on Ingredients

Synonyms Graffiti Remover.
Chemical Family MIXTURES.
Formula 7-7785-3

Chemical name	CAS No	weight-%	Trade secret
Acetone	67-64-1	20-25	*
Dimethyl Glutarate	1119-40-0	10-15	*
Petroleum naphtha, light aromatic	64742-95-6	10-15	*
Propane	74-98-6	5-10	*
Toluene	108-88-3	5-10	*
N-Butane	106-97-8	5-10	*
1,2,4 Trimethylbenzene	95-63-6	5-10	*
Propylene carbonate	108-32-7	1-5	*
Ethyl alcohol	64-17-5	1-5	*
Pine Oil	8002-09-3	1-5	*
D-Limonene	5989-27-5	1-5	*
Diacetone alcohol	123-42-2	1-5	*
Cocamide diethanolamine	68603-42-9	1-2	*
Cumene	98-82-8	<1	*

* The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First aid measures

FIRST AID MEASURES

Eye Contact Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Skin contact Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advise.

inhalation If overcome by vapor, move person to fresh air. If person is not breathing, call 911 or an ambulance, then provide artifical respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advise.

INGESTION Call a poison control center or doctor for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Symptoms Acute: Prolonged inhalation of concentrated vapor or mist may cause headaches, dizziness and nausea. Prolonged and repeated contact with skin may cause irritation and reddening. Contact with eyes causes irritation.

Indication of any immediate medical attention and special treatment needed

Note to physicians Contains petroleum distillates, do not induce vomiting because of aspiration neumonia hazard.

5. Fire-fighting measures

Suitable extinguishing media
Dry chemical, CO2 or water spray.

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical
This product is under pressure. Water spray may be used to cool cans in the vicinity of fire or excessive heat to prevent the explosion of the cans.

Hazardous combustion products Thermal decomposition may yield gases like nitrogen oxides, carbon monoxide and carbon dioxide.

Explosion data
Sensitivity to Mechanical Impact Contents under pressure. This product is extremely flammable. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).
Sensitivity to Static Discharge Keep away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors and static electricity).

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Use in well-ventilated area ONLY. NOTICE: Reports have associated repeated and prolonged occupational over exposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. To avoid breathing vapor or spray mist open windows and doors or use other means to ensure fresh air entry during application and drying. If you experience eye watering, headaches, or dizziness, increase fresh air or wear an appropriate, properly fitted respirator (NIOSH approved), or leave the area. NOTE: Follow respirator manufacturer's instructions carefully for respirator use.

For emergency responders Remove all sources of ignition.

Environmental Precautions

Environmental Precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for Containment Provide adequate ventilation to area being treated. Soak up spills with chemically inert, absorbent material.

Methods for cleaning up Clean contaminated surface thoroughly.

7. Handling and Storage

Precautions for safe handling

Advice on safe handling Handle as an extremely flammable material. Avoid contact with skin, eyes and clothing. Store cans in a cool, dry place away from heat and open flame.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). **AEROSOL STORAGE LEVEL III (NFPA-30B).**

Incompatible Materials Avoid heat, open flame and contact with strong acids, strong bases and strong oxidizers.

8. Exposure Controls/Personal Protection

Control parameters

Exposure guidelines See occupational exposure limits listed below.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Acetone 67-64-1	STEL: 750 ppm TWA: 500 ppm	TWA: 1000 ppm TWA: 2400 mg/m³ (vacated) TWA: 750 ppm (vacated) TWA: 1800 mg/m³ (vacated) STEL: 2400 mg/m³ The acetone STEL does not apply to the cellulose acetate fiber industry. It is in effect for all other sectors (vacated) STEL: 1000 ppm	IDLH: 2500 ppm TWA: 250 ppm TWA: 590 mg/m³
Propane 74-98-6	TWA: 1000 ppm	TWA: 1000 ppm TWA: 1800 mg/m³ (vacated) TWA: 1000 ppm (vacated) TWA: 1800 mg/m³	IDLH: 2100 ppm TWA: 1000 ppm TWA: 1800 mg/m³
Toluene 108-88-3	TWA: 20 ppm	TWA: 200 ppm (vacated) TWA: 100 ppm (vacated) TWA: 375 mg/m³ (vacated) STEL: 150 ppm (vacated) STEL: 560 mg/m³ Ceiling: 300 ppm	IDLH: 500 ppm TWA: 100 ppm TWA: 375 mg/m³ STEL: 150 ppm STEL: 560 mg/m³
N-Butane 106-97-8	STEL: 1000 ppm	(vacated) TWA: 800 ppm (vacated) TWA: 1900 mg/m³	TWA: 800 ppm TWA: 1900 mg/m³
1,2,4 Trimethylbenzene 95-63-6	-	-	TWA: 25 ppm TWA: 125 mg/m³
Ethyl alcohol 64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m³	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m³
Diacetone alcohol 123-42-2	TWA: 50 ppm	TWA: 50 ppm TWA: 240 mg/m³ (vacated) TWA: 50 ppm (vacated) TWA: 240 mg/m³	IDLH: 1800 ppm TWA: 50 ppm TWA: 240 mg/m³
Cumene 98-82-8	TWA: 50 ppm	TWA: 50 ppm TWA: 245 mg/m³ (vacated) TWA: 50 ppm (vacated) TWA: 245 mg/m³ (vacated) S* S*	IDLH: 900 ppm TWA: 50 ppm TWA: 245 mg/m³

Appropriate engineering controls

Engineering controls Use with adequate general or local exhaust ventilation.

Individual protection measures, such as personal protective equipment

Eye/face Protection Conventional eyeglasses to guard against splashing.

Skin and Body Protection Chemical resistant gloves required.

Respiratory protection Use in well-ventilated area ONLY. NOTICE: Reports have associated repeated and prolonged occupational over exposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. To avoid breathing vapor or spray mist open windows and doors or use other means to ensure fresh air entry during application and drying. If you experience eye watering, headaches, or dizziness, increase fresh air or wear an appropriate, properly fitted respirator (NIOSH approved), or leave the area. NOTE: Follow respirator manufacturer's instructions carefully for respirator use.

General hygiene considerations Wash hands thoroughly after handling. Wash contaminated clothing before reuse.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical State	Aerosol		
Appearance	Dark yellow to light green liquid	**Odor**	Petroleum distillates
Color	dark yellow	**Odor threshold**	No information available

Property	Values	Remarks • Method
pH	Not applicable	Solvent-based product.
Melting point/freezing point	Not applicable	No information available
Boiling point/boiling range	Acetone 133 F/56.29 C	No information available
Flash Point	Not Available. This is an aerosol product for which Flame Projection is over 18 inches with 1 inches flashback. Temperatures above 120 F may cause cans to burst.	No information available
Evaporation Rate	Faster than butyl acetate	No information available
Flammability (solid, gas)		No information available
Flammability Limits in Air		No information available
Upper flammability limits	Not available	
Lower Flammability Limit	Not available	
Vapor pressure		No information available
Vapor Density		No information available
Specific gravity	0.910 +/- 0.015 concentrate	No information available
Water solubility	Insoluble in water	No information available
Solubility in other solvents		No information available
Partition coefficient		No information available
Autoignition Temperature		No information available
Decomposition temperature		No information available
Kinematic viscosity		No information available
Dynamic viscosity		No information available
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC content (%)	49.85%
Density	7.58 lb/gal
Bulk Density	No information available

10. Stability and Reactivity

Reactivity
Not applicable
no data available

Chemical stability
Stable.
Possibility of hazardous reactions
Temperatures above 130 °F may cause cans to burst with force.
hazardous polymerization Hazardous polymerization does not occur.

Conditions to Avoid
Temperatures above 122 °F (50 °C).
Incompatible Materials
Avoid heat, open flame and contact with strong acids, strong bases and strong oxidizers.
Hazardous decomposition products
Thermal decomposition may yield gases like nitrogen oxides, carbon monoxide and carbon dioxide.

11. Toxicological Information

Information on likely routes of exposure

Product Information This product has not been tested as whole. See below for information on ingredients.

inhalation no data available.

Eye Contact no data available.

Skin contact no data available.

INGESTION no data available.

Chemical name	Oral LD50	dermal LD50	Inhalation LC50
Acetone 67-64-1	= 5800 mg/kg (Rat)	-	= 50100 mg/m³ (Rat) 8 h
Dimethyl Glutarate 1119-40-0	= 8191 mg/kg (Rat)	-	> 5.6 mg/L (Rat) 4 h
Petroleum naphtha, light aromatic 64742-95-6	= 8400 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	= 3400 ppm (Rat) 4 h
Propane 74-98-6	-	-	= 658 mg/L (Rat) 4 h
Toluene 108-88-3	= 2600 mg/kg (Rat)	= 12000 mg/kg (Rabbit)	= 12.5 mg/L (Rat) 4 h
N-Butane 106-97-8	-	-	= 658 g/m³ (Rat) 4 h
1,2,4 Trimethylbenzene 95-63-6	= 3280 mg/kg (Rat)	> 3160 mg/kg (Rabbit)	= 18 g/m³ (Rat) 4 h
Propylene carbonate 108-32-7	= 29000 mg/kg (Rat)	> 20 mL/kg (Rabbit)	-
Ethyl alcohol 64-17-5	= 7060 mg/kg (Rat)	-	= 124.7 mg/L (Rat) 4 h
Pine Oil 8002-09-3	= 3200 mg/kg (Rat)	= 5 g/kg (Rabbit)	-
D-Limonene 5989-27-5	= 4400 mg/kg (Rat)	> 5 g/kg (Rabbit)	-
Diacetone alcohol 123-42-2	= 4 g/kg (Rat)	= 13500 mg/kg (Rabbit)	-
Cocamide diethanolamine 68603-42-9	= 12400 µL/kg (Rat)	-	-
Cumene 98-82-8	= 1400 mg/kg (Rat)	= 12300 µL/kg (Rabbit)	> 3577 ppm (Rat) 6 h = 39000 mg/m³ (Rat) 4 h

Information on toxicological effects

Symptoms Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation May cause skin irritation and reddening after prolonged or repeated contact with skin.
Serious eye damage/eye irritation Irritating to eyes.
irritation May cause skin and eye irritation.
corrosivity Not applicable.
sensitization No information available.
Germ Cell Mutagenicity No information available.
carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen. Ethanol has been shown to be carcinogenic in long-term studies only when consumed as alcoholic beverage.

Chemical name	ACGIH	IARC	NTP	OSHA
Toluene 108-88-3		Group 3		
D-Limonene 5989-27-5		Group 2A Group 3		X

Cocamide diethanolamine 68603-42-9		Group 2B		X
Cumene 98-82-8		Group 2B		X

Reproductive Toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Aspiration Hazard No information available.

Numerical measures of toxicity - Product Information

Unknown acute toxicity -
The following values are calculated based on chapter 3.1 of the GHS document .
ATEmix (oral) 3025 mg/kg
ATEmix (dermal) 3918 mg/kg
ATEmix (inhalation-gas) 1395 mg/l
ATEmix (inhalation-dust/mist) 3.7 mg/l
ATEmix (inhalation-vapor) 13 mg/l

12. Ecological Information

This product contains chemicals which are listed as a marine pollutants according to DOT.

ecotoxicity

31.05% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Acetone 67-64-1		6210 - 8120: 96 h Pimephales promelas mg/L LC50 static 4.74 - 6.33: 96 h Oncorhynchus mykiss mL/L LC50 8300: 96 h Lepomis macrochirus mg/L LC50	EC50 = 14500 mg/L 15 min	10294 - 17704: 48 h Daphnia magna mg/L EC50 Static 12600 - 12700: 48 h Daphnia magna mg/L EC50
Dimethyl Glutarate 1119-40-0		19.6 - 26.2: 96 h Pimephales promelas mg/L LC50 static		122.1 - 163.5: 48 h Daphnia magna mg/L EC50
Petroleum naphtha, light aromatic 64742-95-6		9.22: 96 h Oncorhynchus mykiss mg/L LC50		6.14: 48 h Daphnia magna mg/L EC50
Toluene 108-88-3	433: 96 h Pseudokirchneriella subcapitata mg/L EC50 12.5: 72 h Pseudokirchneriella subcapitata mg/L EC50 static	15.22 - 19.05: 96 h Pimephales promelas mg/L LC50 flow-through 12.6: 96 h Pimephales promelas mg/L LC50 static 5.89 - 7.81: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 54: 96 h Oryzias latipes mg/L LC50 static 11.0 - 15.0: 96 h Lepomis macrochirus mg/L LC50 static 28.2: 96 h Poecilia reticulata mg/L LC50 semi-static 50.87 - 70.34: 96 h Poecilia reticulata mg/L LC50 static 14.1 - 17.16: 96 h Oncorhynchus mykiss mg/L LC50 static 5.8: 96 h Oncorhynchus mykiss mg/L LC50 semi-static	EC50 = 19.7 mg/L 30 min	5.46 - 9.83: 48 h Daphnia magna mg/L EC50 Static 11.5: 48 h Daphnia magna mg/L EC50
1,2,4 Trimethylbenzene 95-63-6		7.19 - 8.28: 96 h Pimephales promelas mg/L LC50 flow-through		6.14: 48 h Daphnia magna mg/L EC50
Propylene carbonate 108-32-7	500: 72 h Desmodesmus subspicatus mg/L EC50	1000: 96 h Cyprinus carpio mg/L LC50 semi-static 5300:	EC50 > 10000 mg/L 17 h	500: 48 h Daphnia magna mg/L EC50

		96 h Leuciscus idus mg/L LC50 static		
Ethyl alcohol 64-17-5		12.0 - 16.0: 96 h Oncorhynchus mykiss mL/L LC50 static 100: 96 h Pimephales promelas mg/L LC50 static 13400 - 15100: 96 h Pimephales promelas mg/L LC50 flow-through	EC50 = 34634 mg/L 30 min EC50 = 35470 mg/L 5 min	9268 - 14221: 48 h Daphnia magna mg/L LC50 2: 48 h Daphnia magna mg/L EC50 Static 10800: 24 h Daphnia magna mg/L EC50
Pine Oil 8002-09-3				17 - 28: 48 h Daphnia magna mg/L EC50 Flow through
D-Limonene 5989-27-5		0.619 - 0.796: 96 h Pimephales promelas mg/L LC50 flow-through 35: 96 h Oncorhynchus mykiss mg/L LC50		
Diacetone alcohol 123-42-2		420: 96 h Lepomis macrochirus mg/L LC50 static 420: 96 h Lepomis macrochirus mg/L LC50		8750: 24 h Daphnia magna mg/L EC50
Cocamide diethanolamine 68603-42-9		3.6: 96 h Brachydanio rerio mg/L LC50 semi-static		4.2: 24 h Daphnia magna mg/L EC50
Cumene 98-82-8	2.6: 72 h Pseudokirchneriella subcapitata mg/L EC50	6.04 - 6.61: 96 h Pimephales promelas mg/L LC50 flow-through 4.8: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 2.7: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 5.1: 96 h Poecilia reticulata mg/L LC50 semi-static	EC50 = 0.89 mg/L 5 min EC50 = 1.10 mg/L 15 min EC50 = 1.48 mg/L 30 min EC50 = 172 mg/L 24 h	0.6: 48 h Daphnia magna mg/L EC50 7.9 - 14.1: 48 h Daphnia magna mg/L EC50 Static

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Chemical name	Partition coefficient
Acetone 67-64-1	-0.24
Propane 74-98-6	2.3
Toluene 108-88-3	2.65
N-Butane 106-97-8	2.89
1,2,4 Trimethylbenzene 95-63-6	3.63
Propylene carbonate 108-32-7	0.48
Ethyl alcohol 64-17-5	-0.32
Diacetone alcohol 123-42-2	1.03
Cumene 98-82-8	3.55

Other adverse effects No information available

Ozone This product does not contain CFCs or other ozone depleting substances. Federal regulations prohibit the use CFC propellants in aerosols.

13. Disposal Considerations

Waste treatment methods

Disposal of wastes Dispose of in accordance with federal, state and local regulations.

Contaminated packaging Pressurized container: Do not pierce or burn, even after use. Do not puncture or incinerate container. If empty: Place in trash or offer for recycling if available. If partly filled: Call your local solid waste agency for disposal instructions.

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Acetone 67-64-1		Included in waste stream: F039		U002
Toluene 108-88-3	U220	Included in waste streams: F005, F024, F025, F039, K015, K036, K037, K149, K151		U220
Cumene 98-82-8				U055

Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Toluene 108-88-3			Toxic waste waste number F025 Waste description: Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.	

Chemical name	California Hazardous Waste Status
Acetone 67-64-1	Ignitable
Toluene 108-88-3	Toxic Ignitable
Ethyl alcohol 64-17-5	Toxic Ignitable
D-Limonene 5989-27-5	Toxic
Cumene 98-82-8	Toxic Ignitable

14. Transport Information

DOT Limited Quantity - Graffiti Remover

UN/ID no UN1950

Proper Shipping Name Limited quantity (LQ)

Hazard Class 2.1

Marine pollutant This product contains chemicals which are listed as a marine pollutants according to DOT.

15. Regulatory information

International Inventories

TSCA All ingredients of this product are listed or are excluded from listing under the U.S. Toxic Subtances Control Act (TSCA) Chemical Substance Inventory.

DSL All ingredients are listed or are excluded from listing on the DSL.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and 40 CFR 372. This information must be included in all SDSs that are copied and distributed for this material.

Chemical name	CAS No	weight-%	SARA 313 - Threshold Values %
Toluene - 108-88-3	108-88-3	5-10	1.0
1,2,4 Trimethylbenzene - 95-63-6	95-63-6	5-10	1.0
Cumene - 98-82-8	98-82-8	<1	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	yes
Chronic Health Hazard	yes
Fire Hazard	yes
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Toluene 108-88-3	1000 lb	X	X	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Acetone 67-64-1	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ
Toluene 108-88-3	1 lb		RQ 1 lb final RQ RQ 0.454 kg final RQ
Cumene 98-82-8	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical name	California Proposition 65
Toluene - 108-88-3	Developmental Female Reproductive
Cocamide diethanolamine - 68603-42-9	Carcinogen
Cumene - 98-82-8	Carcinogen

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Acetone 67-64-1	X	X	X

Propane 74-98-6	X	X	X
Toluene 108-88-3	X	X	X
N-Butane 106-97-8	X	X	X
1,2,4 Trimethylbenzene 95-63-6	X	X	X
Ethyl alcohol 64-17-5	X	X	X
Pine Oil 8002-09-3	X		
Diacetone alcohol 123-42-2	X	X	X
Cumene 98-82-8	X	X	X

U.S. EPA Label information
EPA Pesticide registration number Not applicable

16. Other information

NFPA	**Health Hazards** 2	**Flammability** 4	**Instability** 1	**Physical and chemical properties** Not applicable
HMIS	**Health Hazards** 2*	**Flammability** 4	**Physical Hazards** 1	**Personal Protection** X

Prepared by Regulatory Department
Issue date 12-Mar-2015
Revision note
This SDS supercedes a previous MSDS dated: Sept. 10, 2013
Disclaimer
The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

MATERIAL SAFETY DATA SHEET

SPRAYPAK WASP, BEE & HORNET KILLER

1. Product And Company Identification

Supplier
Chase Products Co.
19th and Gardner Road
Broadview, IL 60155 USA

Company Contact: Aludia B. Hernandez
Telephone Number: 708-865-1000
FAX Number: 708-865-0923
E-Mail: sales@chaseproducts.com
Web Site: www.chaseproducts.com

Manufacturer
Chase Products Co.
19th and Gardner Road
Broadview, IL 60155 USA

Company Contact: Aludia B. Hernandez
Telephone Number: 708-865-1000
FAX Number: 708-865-0923
E-Mail: sales@chaseproducts.com
Web Site: www.chaseproducts.com

Supplier Emergency Contacts & Phone Number
Chem-Tel: 1-800-255-3924

Manufacturer Emergency Contacts & Phone Number
Chem-Tel: 1-800-255-3924

Issue Date: 03/28/2006

Product Name: SPRAYPAK WASP, BEE & HORNET KILLER
Chemical Name: 7-7736-3
CAS Number: Not Established
EPA Registry Number: 498-156
MSDS Number: 3663
Product Code: 433-4108-4
Product/Material Uses - Insecticide

2. Composition/Information On Ingredients

Ingredient Name	CAS Number		Percent Of Total Weight
CARBON DIOXIDE	124-38-9		
HYDROTREATED PETROLEUM DISTILLATE	64742-47-8		
LOW ODOR MINERAL SPIRITS	64742-47-8		
SUMITHRIN	26002-80-2		0.125
TETRAMETHRIN	7696-12-0		0.2

Hazardous components, according to OSHA, are listed when present at 1.0% or greater.

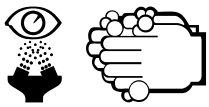
3. Hazards Identification

Primary Routes(s) Of Entry - Ingestion (possible, but considered unlikely), eye and skin contact, inhalation.
Eye Hazards - Irritant to the eyes.
Skin Hazards - Prolonged or repeated exposure can cause irritation and reddening of the skin, possibly progressing into dermatitis.
Ingestion Hazards - This is an aerosol product, ingestion is unlikely to occur. Contains petroleum distillate, harmful if swallowed. If accidentally swallowed, do not induce vomiting. Call physician immediately.
Inhalation Hazards - Deliberate inhalation of concentrate vapor or mist can cause nasal and respiratory irritation, nausea, and nervous disorders such as fatigue, headaches, dizziness, lack of coordination, tremors and unconsciousness.
Chronic/Carcinogenicity Effects - Not known chronic effects based on available data. None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as being carcinoges.

3. Hazards Identification - Continued

Teratogenicity (Birth Defects) - Not known
Reproductive Effects - Not known
Neurotoxicity - Not known
Mutagenicity (Genetic Effect) - Not known
Signs And Symptoms - Acute: Deliberate inhalation of concentrate vapor or mist may cause headaches, dizziness and nausea. Prolonged contact with the skin causes irritation. Causes eye irritation.
Conditions Aggravated By Exposure - Pre-existing skin and respiratory disorders.
Conditions Aggravated By Overexposure - Pre-existing skin and respiratory disorders.

First Aid (Pictograms)



4. First Aid Measures

Eye - Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
Skin - Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advise.
Ingestion - Call a poison control center or doctor immediately for treatment advise. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
Inhalation - If overcome by vapor move victim to fresh air. If person is not breathing, call 911 or an ambulance, then provide artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advise.
Note To Physician - Contains petroleum distillate. Vomiting may cause aspiration pneumonia.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

5. Fire Fighting Measures

Flash Point: Not available °F Not available °C
Flash Point Method: Not available
Lower Explosive Limit: Not available
Upper Explosive Limit: Not available

Fire And Explosion Hazards - This product is an aerosol product for which **Flame Projection is over 18 in. with flashback.** Temperatures above 120 F may cause cans to burst.
Extinguishing Media - Use CO_2 (Carbon Dioxide), dry chemical, or water fog.
Fire Fighting Instructions - Water spray may be used to cool cans in the vicinity of fire or excessive heat.

6. Accidental Release Measures

Provide adequate ventilation to area being treated. Soak up spills with chemically inert, absorbent material.

Handling & Storage (Pictograms)

7. Handling And Storage

Handling And Storage Precautions - Store in a cool, dry place away from heat and open flame.
Handling Precautions - Do not deliberately inhale vapor or spray mist. Avoid contact with skin and eyes. Keep out of reach of children.
Storage Precautions - Keep away from heat, sparks, flame, and other sources of ignition (i.e., pilot lights, electric motors and static electricity). **AEROSOL STORAGE LEVEL III (NFPA-30B)**
Work/Hygienic Practices - Wash hands thoroughly with soap and water after using this product.

Protective Clothing (Pictograms)

8. Exposure Controls/Personal Protection

Engineering Controls - Use with adequate general and local exhaust ventilation.
Eye/Face Protection - Conventional eyeglasses to guard against splashing.
Skin Protection - Rubber or household type gloves.
Respiratory Protection - None required if used in a well-ventilated area. **When using indoors, keep windows and doors open until fumes dissipate.** Follow label directions carefully.

Ingredient(s) - Exposure Limits
CARBON DIOXIDE
ACGIH TLV-STEL 30,000 ppm ; ACGIH TLV-TWA 5,000 ppm ; OSHA PEL-TWA 5,000 ppm
HYDROTREATED PETROLEUM DISTILLATE
100 ppm or 525 mg/m3 (recommended by the manufacturer)
LOW ODOR MINERAL SPIRITS
OSHA PEL 500ppm ; ACGIH TLV 100ppm (Limits for Stoddar Solvent used as a guide).
SUMITHRIN
Not established

9. Physical And Chemical Properties

Appearance - Clear to slight yellow liquid.
Odor - Petroleum distillate odor.

Chemical Type: Mixture
Physical State: Liquid
Melting Point: Not applicable °F Not applicable °C
Boiling Point: Hydrotreated Petroleum Dist. 468-529 °F Hydrotreated Petroleum Dist. 242-276 °C
Specific Gravity: 0.804 +/- 0.005
Percent VOCs: 44.83
Solubility: Insoluble
Evaporation Rate: Faster than butyl acetate

10. Stability And Reactivity

Stability: Stable
Hazardous Polymerization: Will not occur

Conditions To Avoid (Stability) - Temperatures above 120 F
Incompatible Materials - Avoid heat, open flame and contact with strong oxidizers.
Hazardous Decomposition Products - Thermal decomposition may yield toxic gases like carbon monoxide, carbon

10. Stability And Reactivity - Continued

dioxide and nitrogen oxides.
Conditions To Avoid (Polymerization) - Temperatures above 120 F

11. Toxicological Information

No Data Available...

12. Ecological Information

Ecotoxicological Information - No specific ecological data is available for this product. Please refer to Section 6 for information regarding accidental releases and Section 15 for regulatory reporting information.
Acute Toxicity - Fish And Invertebrates - This pesticide is toxic to fish and other aquatic invertebrates. Do not apply directly to water. Drift and runoff from treated sites may be hazardous to fish in adjacent waters.

13. Disposal Considerations

Do not puncture or incinerate container. **If empty:** Place in trash or offer for recycling if available. **If partly filled:** Call your local solid waste agency or 1-800-CLEANUP for disposal instructions.

14. Transport Information

Proper Shipping Name - ORM-D Consumer Commodity

Hazard Class
2.1

DOT Identification Number
UN1950

DOT Shipping Label
Aerosol Consumer Commodity

15. Regulatory Information

U.S. Regulatory Information - All ingredients of this product are listed or are excluded from listing under the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

SARA Hazard Classes
Acute Health Hazard; Fire Hazard

SARA Title III - Section 313 Form "R"/TRI Reportable Chemical

SARA Section 313 Notification - This product contains the following toxic chemicals (above the *de minimis* level) subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372. This information must be included in all MSDSs that are copied and distributed for this material: Sumithrin, Tetramethrin. See section 2 for % amounts in the product.

Ingredient(s) - U.S. Regulatory Information
SUMITHRIN
SARA Title III - Section 313 Form "R"/TRI Reportable Chemical; SARA - Acute Health Hazard

TETRAMETHRIN
SARA Title III - Section 313 Form "R"/TRI Reportable Chemical; SARA - Acute Health Hazard

Ingredient(s) - State Regulations
CARBON DIOXIDE
New Jersey - Workplace Hazard; Pennsylvania - Workplace Hazard; Massachusetts - Hazardous Substance; New York City - Hazardous Substance

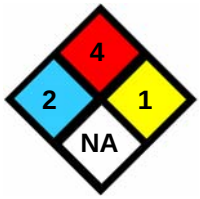
15. Regulatory Information - Continued

Ingredient(s) - State Regulations - Continued

TETRAMETHRIN

New Jersey - Environmental Hazard

NFPA



HMIS

HEALTH	2
FLAMMABILITY	4
REACTIVITY	1
PERSONAL PROTECTION	B

16. Other Information

Revision/Preparer Information

MSDS Preparer: Laura E. Radevski

MSDS Preparer Phone Number: 708-865-1000

This MSDS Supercedes A Previous MSDS Dated: 05/05/2005

Disclaimer

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitablility of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purposes(s).

Chase Products Co.

Printed Using MSDS Generator™ 2000

Safety Data Sheet
Spartan Chemical Company, Inc.

Revision Date: 28-Jul-2015

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name: **SSE CARPET PRESPRAY & SPOTTER**
Product Number: 3033 , 3035
Recommended Use: Carpet cleaner
Uses Advised Against: For Industrial and Institutional Use Only

Manufacturer/Supplier: Spartan Chemical Company, Inc.
1110 Spartan Drive
Maumee, Ohio 43537 USA
800-537-8990 (Business hours)
www.spartanchemical.com

24 Hour Emergency Phone Numbers:
Medical Emergency/Information: 888-314-6171
Transportation/Spill/Leak: CHEMTREC 800-424-9300

2. HAZARDS IDENTIFICATION

GHS Classification
Not Classified Not dangerous according to the Globally Harmonized System (GHS)

GHS Label Elements
Signal Word: **No signal word**
Symbols:
Hazard Statements: No hazard statements
Precautionary Statements:
Prevention: Not Applicable
Response:
-Specific Treatment: See Safety Data Sheet Section 4: "FIRST AID MEASURES" for additional information.

Storage: Not Applicable
Disposal: Not Applicable

Hazards Not Otherwise Classified: Not Applicable

Other Information:
- May be harmful if swallowed.
- May cause eye irritation.
- May cause skin irritation.
- Inhalation of vapors or mist may cause respiratory irritation.
- Keep out of reach of children.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
water	7732-18-5	60-100
propylene glycol monomethyl ether	107-98-2	1-5
acrylate copolymer	63744-68-3	1-5

Specific chemical identity and/or exact percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

-Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

-Skin Contact: Wash with soap and water. If skin irritation occurs: Get medical attention.

-Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison control center or physician if you feel unwell.

-Ingestion: Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if you feel unwell.

Note to Physicians: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Product does not support combustion, Use extinguishing agent suitable for type of surrounding fire

Specific Hazards Arising from the Chemical: Dried product is capable of burning. Combustion products are toxic.

Hazardous Combustion Products: May include Carbon monoxide Carbon dioxide and other toxic gases or vapors.

Protective Equipment and Precautions for Firefighters: Wear MSHA/NIOSH approved self-contained breathing apparatus (SCBA) and full protective gear. Cool fire-exposed containers with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

Environmental Precautions: Do not rinse spill onto the ground, into storm sewers or bodies of water.

Methods for Clean-Up: Prevent further leakage or spillage if safe to do so. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

7. HANDLING AND STORAGE

Advice on Safe Handling: Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

Storage Conditions: Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep from freezing.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits: .

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH
propylene glycol monomethyl ether 107-98-2	STEL: 150 ppm TWA: 100 ppm	(vacated) TWA: 100 ppm (vacated) TWA: 360 mg/m^3 (vacated) STEL: 150 ppm (vacated) STEL: 540 mg/m^3	TWA: 100 ppm TWA: 360 mg/m^3 STEL: 150 ppm STEL: 540 mg/m^3

Engineering Controls: Provide good general ventilation.
If work practices generate dust, fumes, gas, vapors or mists which expose workers to chemicals above the occupational exposure limits, local exhaust ventilation or other engineering controls should be considered.

Personal Protective Equipment

Eye/Face Protection: Not required with expected use.

Skin and Body Protection: Not required with expected use.

Respiratory Protection: Not required with expected use.
If occupational exposure limits are exceeded or respiratory irritation occurs, use of a NIOSH/MSHA approved respirator suitable for the use-conditions and chemicals in Section 3 should be considered.

General Hygiene Considerations: Wash hands and any exposed skin thoroughly after handling. See 29 CFR 1910.132-138 for further guidance.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Physical State:	Liquid
Color:	Light green
Odor:	Citrus fragrance
pH:	8.5-9.5
Melting Point / Freezing Point:	No information available.
Boiling Point / Boiling Range:	100 °C / 212 °F
Flash Point:	> 100 °C / > 212 °F ASTM D56
Evaporation Rate:	< 1 (Butyl acetate = 1)
Flammability (solid, gas)	No information available.
Upper Flammability Limit:	No information available.
Lower Flammability Limit:	No information available.
Vapor Pressure:	No information available.
Vapor Density:	No information available.
Specific Gravity:	1.01
Solubility(ies):	Soluble in water
Partition Coefficient:	No information available.
Autoignition Temperature:	No information available.
Decomposition Temperature:	No information available.
Viscosity:	No information available.

10. STABILITY AND REACTIVITY

Reactivity: This material is considered to be non-reactive under normal conditions of use.
Chemical Stability: Stable under normal conditions.
Possibility of Hazardous Reactions: Not expected to occur with normal handling and storage.
Conditions to Avoid: Extremes of temperature and direct sunlight.
Incompatible Materials: Strong oxidizing agents. Strong acids.
Hazardous Decomposition Products: May include carbon monoxide, carbon dioxide (CO2) and other toxic gases or vapors.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Eyes, Skin, Ingestion, Inhalation.
Symptoms of Exposure:
-Eye Contact: Pain and redness.
-Skin Contact: Drying of the skin.
-Inhalation: Nasal discomfort and coughing.
-Ingestion: Pain, nausea, vomiting and diarrhea.
Immediate, Delayed, Chronic Effects
Product Information: Data not available or insufficient for classification.

Target Organ Effects: Central nervous system. -Eyes. Respiratory System. -Skin.
Numerical Measures of Toxicity
The following acute toxicity estimates (ATE) are calculated based on the GHS document.
Data not available or insufficient for classification.

Component Acute Toxicity Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
water 7732-18-5	> 90 mL/kg (Rat)	Not Available	Not Available
propylene glycol monomethyl ether 107-98-2	= 5200 mg/kg (Rat)	= 13000 mg/kg (Rabbit)	= 54.6 mg/L (Rat) 4 h > 24 mg/L (Rat) 1 h

Carcinogenicity: No components present at 0.1% or greater are listed as to being carcinogens by ACGIH, IARC, NTP or OSHA.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/Aquatic Plants	Fish	Toxicity to Microorganisms	Crustacea
propylene glycol monomethyl ether 107-98-2	Not Available	20.8: 96 h Pimephales promelas g/L LC50 static 4600 - 10000: 96 h Leuciscus idus mg/L LC50 static	Not Available	23300: 48 h Daphnia magna mg/L EC50

Persistence and Degradability: No information available.
Bioaccumulation: No information available.

Other Adverse Effects: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal of Wastes: Dispose of in accordance with federal, state and local regulations.
Contaminated Packaging: Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT: Not Regulated
Proper Shipping Name: Non Hazardous Product
Special Provisions: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Check with a trained hazardous materials transportation expert for information specific to your situation.

IMDG: Not Regulated
Proper Shipping Name: Non Hazardous Product

15. REGULATORY INFORMATION

TSCA Status: (Toxic Substance Control Act Section 8(b) Inventory)
All chemical substances in this product are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

SARA 313
This product does not contain listed substances above the "de minimus" level

SARA 311/312 Hazard Categories

Acute Health Hazard:	Yes
Chronic Health Hazard:	No
Fire Hazard:	No
Sudden release of pressure hazard:	No
Reactive Hazard:	No

California Proposition 65
This product is not subject to warning requirements under California Proposition 65.

16. OTHER INFORMATION

NFPA	**Health Hazards:** 1	**Flammability:** 0	**Instability:** 0	**Special:** N/A
HMIS	**Health Hazards:** 1	**Flammability:** 0	**Physical Hazards:** 0	

Revision Date: 28-Jul-2015
Reasons for Revision: Section 14 and 15

Disclaimer:

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET

1. Identification

Product identifier **Hercules Staput**

Other means of identification

Product code 1618E

Synonyms Part Numbers: 25101, 25103, 25105, 25110, 25120, 25122

Recommended use Plumbing Mastic

Recommended restrictions Workers (and your customers or users in the case of resale) should be informed of the potential presence of respirable dust and respirable crystalline silica as well as their potential hazards. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.

Manufacturer/Importer/Supplier/Distributor information

Company Name HCC Holdings, Inc. an Oatey Affiliate

Address 4700 West 160th Street
Cleveland, OH 44135

Telephone 216-267-7100

E-mail info@oatey.com

Transport Emergency Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)

Emergency First Aid 1-877-740-5015

Contact person MSDS Coordinator

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement The mixture does not meet the criteria for classification.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response Wash hands after handling.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Calcium carbonate	1317-65-3	60-100
Kaolin	1332-58-7	5-10
Mineral Wool	65997-17-3	1-5
Petroleum-based Lubricating Oil	64741-88-4	1-5

Crystalline silica (Quartz)	14808-60-7	<1
Other components below reportable levels		16.5

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed Coughing.

Indication of immediate medical attention and special treatment needed Treat symptomatically.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up Stop the flow of material, if this is without risk. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Avoid prolonged exposure.

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Calcium carbonate (CAS 1317-65-3)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Kaolin (CAS 1332-58-7)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Crystalline silica (Quartz) (CAS 14808-60-7)	TWA	0.3 mg/m3	Total dust.
		0.1 mg/m3	Respirable.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Crystalline silica (Quartz) (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.
Kaolin (CAS 1332-58-7)	TWA	2 mg/m3	Respirable fraction.
Petroleum-based Lubricating Oil (CAS 64741-88-4)	TWA	5 mg/m3	Inhalable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Calcium carbonate (CAS 1317-65-3)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Crystalline silica (Quartz) (CAS 14808-60-7)	TWA	0.05 mg/m3	Respirable dust.
Kaolin (CAS 1332-58-7)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Mineral Wool (CAS 65997-17-3)	TWA	3 fibers/cm3	Dust.
		3 fibers/cm3	Fiber.
		5 mg/m3	Fiber, total
		5 mg/m3	fibers, total dust
Petroleum-based Lubricating Oil (CAS 64741-88-4)	Ceiling	1800 mg/m3	
	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves.

Other Wear suitable protective clothing.

Respiratory protection Use a particulate filter respirator for particulate concentrations exceeding the Occupational Exposure Limit.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Solid.

Form Putty.

Color	Off-white.
Odor	Slight.
Odor threshold	Not available.
pH	Not applicable
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not determined
Flash point	> 212.0 °F (> 100.0 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	1.8
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	> 5000000 cP
Other information	
VOC (Weight %)	6 g/l

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Acids. Fluorine.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Coughing.

Information on toxicological effects

Acute toxicity	Not available.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) Risk of cancer cannot be excluded with prolonged exposure.

IARC Monographs. Overall Evaluation of Carcinogenicity

Crystalline silica (Quartz) (CAS 14808-60-7)	1 Carcinogenic to humans.
Petroleum-based Lubricating Oil (CAS 64741-88-4)	3 Not classifiable as to carcinogenicity to humans.

NTP Report on Carcinogens

Crystalline silica (Quartz) (CAS 14808-60-7)	Known To Be Human Carcinogen.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.
Further information	This product has no known adverse effect on human health.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
One or more components are not listed on TSCA.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Calcium carbonate (CAS 1317-65-3)
Crystalline silica (Quartz) (CAS 14808-60-7)
Kaolin (CAS 1332-58-7)
Petroleum-based Lubricating Oil (CAS 64741-88-4)

US. New Jersey Worker and Community Right-to-Know Act

Calcium carbonate (CAS 1317-65-3)
Crystalline silica (Quartz) (CAS 14808-60-7)
Kaolin (CAS 1332-58-7)
Mineral Wool (CAS 65997-17-3)

US. Pennsylvania Worker and Community Right-to-Know Law

Calcium carbonate (CAS 1317-65-3)
Crystalline silica (Quartz) (CAS 14808-60-7)
Kaolin (CAS 1332-58-7)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Crystalline silica (Quartz) (CAS 14808-60-7)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 22-April-2015

Revision date -

Version # 01

HMIS® ratings Health: 0
Flammability: 0
Physical hazard: 0

NFPA ratings

Disclaimer HCC Holdings Inc. an Oatey Affiliate cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

****** MATERIAL SAFETY DATA SHEET ******

22240- STABIL Marine Fuel Stabilizer

SEC 1 - PRODUCT AND MANUFACTURER INFO
SEC 2 - COMPOSITION INFORMATION
SEC 3 - HAZARDS IDENTIFICATION
SEC 4 - FIRST AID MEASURES
SEC 5 - FIRE FIGHTING MEASURES
SEC 6 - ACCIDENTAL RELEASE MEASURES
SEC 7 - HANDLING AND STORAGE
SEC 8 - EXPOSURE, PERS. PROTECTION
SEC 9 - PHYS, CHEM PROPERTIES
SEC 10 - STABILITY, REACTIVITY
SEC 11 - TOXICOLOGY INFORMATION
SEC 12 - ECOLOGICAL INFORMATION
SEC 13 - DISPOSAL CONSIDERATIONS
SEC 14 - TRANSPORT INFORMATION
SEC 15 - REGULATORY INFORMATION
SEC 16 - ADDITIONAL INFORMATION

**** SECTION 1 - CHEMICAL PRODUCT AND MANUFACTURER IDENTIFICATION ****

Product Name: 22240- STABIL Marine Fuel Stabilizer

Part Number:

22240

Product CAS: Mixt-ur-e

Product Code: 22240

Synonyms: 22240 STABIL Marine Fuel Stabilizer; 22240- STABIL Marine Fuel Stabilizer; 22241- STABIL Marine Fuel Stabilizer; 22250- STABIL Marine Fuel Stabilizer

MANUFACTURER IDENTIFICATION
Name: Gold Eagle Company
Address: 4400 S. Kildare Blvd.
City: Chicago **State:** IL **Zip:** 60632-4372

For information call: 773-376-4400

Emergency Number: N/A

Emergency Agency: INFOTRAC

Agency Number: 1-800-535-5053

MSDS Effective Date: 6/20/2007

MSDS Supersedes Date: 3/1/2013
Miscellaneous:
Product CAS: Mixture

Brief Description: Fuel stabilizer for gasoline powered engines.
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**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

Chemical Name	CAS	MIN	MAX
Petroleum Distillate	64742-47-8	0	80
Additive Mixture	(none)	0	20

Miscellaneous:

CHEMICAL NAME	LIMIT VALUES
Additive Mixture (CAS#:Mixture)	N/A
Petroleum Distillate	N/A

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**** SECTION 3 - HAZARDS IDENTIFICATION ****

EMERGENCY OVERVIEW:

NFPA: Health: 1 **Fire:** 1 **Reactivity:** 0 **Specific Hazard:** None

HMIS: Health: 1 **Flammability:** 1 **Reactivity:** 0 **PPE:** B

Miscellaneous:
This product may contain components above de minimus concentrations that are considered carcinogenic by OSHA, IARC, NTP or Proposition 65.
POTENTIAL HEALTH EFFECTS
Target Organs/Primary Route(s) of Entry:

Eye:
Mild irritant.

Skin:
Mild irritant

Ingestion:
Toxicity is relatively low, there is a risk of aspiration of product into the lungs.
On ingestion of large quantities, slight GI discomfort diarrhea, and headache may
occur. Small doses may produce irritation and diarrhea.

Inhalation:
Low risk of inhalation. Mists above TLV may cause chemical pneumonitis.

Miscellaneous:

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**** SECTION 4 - FIRST AID MEASURES ****

Eye:
If the product contacts the eyes, immediately wash the eyes with large quantities of
room temperature water for at least 15 minutes, occasionally lifting the lower and
upper lids. Get medical attention immediately.

Skin:
If the product contacts the skin, promptly wash the contaminated skin with soap and
water for at least 15 minutes. If this product penetrates the clothing, promptly
remove the clothing and wash the skin with soap and water.

Ingestion:
Do not induce vomiting, product contains petroleum distillate. Get medical attention immediately.

Inhalation:
Move the exposed person to fresh air at once and call emergency medical care. If
breathing has stopped, give artificial respiration. If breathing is difficult, give
humidified oxygen.

Notes to Physician:
No data available.

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**** SECTION 5 - FIRE FIGHTING MEASURES ****

Flash Point: 173 F

AutoIgnition Temperature: N/A

Flammable Limits
Lower Limit: Explosive Limit (LEL): 0.8

Upper Limit: Explosive Limit (UEL): 7.0

Extinguishing Media:

Use carbon dioxide, dry chemical, foam and/or water fog as extinguishing media.

Unusual Fire and Explosion Hazards:
Water may cause frothing

Special Fire Fighting Procedures:
Wear NIOSH approved SCBA respirator in the positive pressure mode and chemical
protective clothing.

General Information:
Flammable Limits: 0.8 to 7.0

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**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

Small Spill: Remove sources of heat or ignition, provide adequate ventilation,
contain leak using absorbent, inert, non-combustible material.

Large Spill: Contain spill, transfer to secure containers. In the event of an
uncontrolled material release, the user should determine if release is reportable
under applicable laws and regulations.
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**** SECTION 7 - HANDLING AND STORAGE ****

Handling:
See other sections of MSDS.

Storage:
See other sections of MSDS.

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**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

GENERAL HYGIENE CONSIDERATIONS:
Use normal hygiene practices.

OTHER PRECAUTIONS:
Product is combustible, handle accordingly.

ENGINEERING CONTROLS:
Local Exhaust: Provide local ventilation to maintain exposure levels below recommended exposure limits.

Mechanical (General): In confined spaces, mechanical ventilation may be required.

Special Ventilation: OSHA TWA=5mg/m3

PERSONAL PROTECTIVE EQUIPMENT
Eyes/face:
Use splash proof chemical, safety goggles or appropriate full-face respirator.

Skin:
Use oil impervious gloves as required.

Respirators:
Normally none is required. If high vapor or mist concentration are expected, use
appropriate NIOSH approved respirator for organic vapors and mists. Respirators
must be selected based on the airborne levels found in the workplace and must not
exceed the working limits of the respirator.

Other Protective Clothing/Equipment:
If there is a possibility of exposure of an individual's body to the product, wear
body-covering work clothes to avoid prolonged or repeated exposure.

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**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Appearance/Odor:
Blue green liquid, solvent odor
pH: N/A

Vapor Pressure: (MM HG): LT 3.0

Vapor Density(Air=1): 4.8

Evaporation Rate: N/A

Viscosity: N/A

Boiling Point: 180 F.

Freezing/Melting Point: N/A

Decomposition Temperature: N/A

Solubility in Water: Negligible

Specific Gravity: 0.9

Molecular Formula: N/A

Molecular Weight: N/A

VOC Coating (minus water): 0 Lbs/Gallon

Coating Density : 0 Lbs/Gallon

Solvent Density : 0 Lbs/Gallon

Percent Solvent (volume): 60

Percent Solids (volume): 0

Percent Water (volume): 0

Percent Volatile by Weight: 0

Miscellaneous:
% Volatile/Volume: 100.0

Percent Solvent (Volume): N/A

Percent Solids (Volume): N/A

Percent Water (Volume): N/A

Product is combustible, keep away from sources of ignition, oxidizing materials and
acid. Store in an area equipped with automatic sprinklers or fire extinguishing
system. Empty containers contain product residues, assume emptied containers to
have same hazards as full containers.

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****** SECTION 10 - STABILITY AND REACTIVITY ******

Chemical Stability:
Stable: Yes

Conditions to Avoid:
Store below 150 F. Do not apply high heat or flame to container. Keep separate
from strong oxidizing agents.

Incompatibilities with Other Materials:
Strong oxidants.

Hazardous Decomposition Products:
Excessive heating and/or incomplete combustion will produce carbon monoxide.

Hazardous Polymerization:
Hazardous polymerization may occur: No

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**** SECTION 11 - TOXICOLOGICAL INFORMATION ****

No data available.

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**** SECTION 12 - ECOLOGICAL INFORMATION ****

No data available.

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**** SECTION 13 - DISPOSAL CONSIDERATIONS ****

Dispose of product in accordance with local, state, and federal regulations. Before
attempting clean up, refer to other sections of MSDS for hazard warning information.

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**** SECTION 14 - TRANSPORT INFORMATION ****

Transportation Information:
Shipping Information (CFR 49 and IMDG):

Proper Shipping Name: Gasoline Additive, N.O.I.
DOT Hazard Class: Not applicable
DOT UN Number: None applicable
IMDG Shipping Name: Non-Hazardous Gasoline Additive Flashpoint GT 141.5 F.

Label Information:
No data available.

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**** SECTION 15 - REGULATORY INFORMATION ****

SARA Title III:

Section 302: None
Section 304: None
Section 311: None
Section 313: None

CERCLA:

Section 311(b)(4): Requires discharges of crude oil and petroleum products in any kind or form to waters must immediately be reported to the National Response Center at (800) 424-8802.

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**** SECTION 16 - ADDITIONAL INFORMATION ****

Disclaimer: Information presented herein is believed to be factual, as it has been derived from the works and opinions of persons believed to be qualified experts. However, nothing contained in this information is to be taken as warranty or representation for which the Gold Eagle Co. bears legal responsibility. The user should review any recommendations in the specific context of the intended use to determine whether they are appropriate.

Prepared by: Mike Profetto

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Material Safety Data Sheet

SECTION I - Material Identity
SECTION II - Manufacturer's Information
SECTION III - Physical/Chemical Characteristics
SECTION IV - Fire and Explosion Hazard Data
SECTION V - Reactivity Data
SECTION VI - Health Hazard Data
SECTION VII - Precautions for Safe Handling and Use
SECTION VIII - Control Measures
SECTION IX - Label Data
SECTION X - Transportation Data
SECTION XI - Site Specific/Reporting Information
SECTION XII - Ingredients/Identity Information

SECTION I - Material Identity

Item Name	
Part Number/Trade Name	1132 - STABIL FUEL STABILIZER (ZAD1132)
National Stock Number	4210001348955
CAGE Code	2M612
Part Number Indicator	A
MSDS Number	186554
HAZ Code	B

SECTION II - Manufacturer's Information

Manufacturer Name	GOLD EAGLE COMPANY
Street	4400 S KILDARE BLVD
City	CHICAGO
State	IL
Country	US
Zip Code	60632
Emergency Phone	800-424-9300 CHEMTREC
Information Phone	773-376-4400

MSDS Preparer's Information

Date MSDS Prepared/Revised	02JUL97
Active Indicator	Y

Alternate Vendors

SECTION III - Physical/Chemical Characteristics

Hazard Storage Compatibility Code	NR
Appearance/Odor	RED LIQUID, SOLVENT ODOR
Boiling Point	180 F
Melting Point	NR
Vapor Pressure	< 3.0
Vapor Density	4.8
Specific Gravity	0.9
Decomposition Temperature	NR
Evaporation Rate	NR
Solubility in Water	NEGLIGIBLE
Percent Volatiles by Volume	100
Chemical pH	NR
Corrosion Rate	NR
Container Pressure Code	1
Temperature Code	4
Product State Code	L

SECTION IV - Fire and Explosion Hazard Data

Flash Point	215
Flash Point Method	TOC
Lower Explosion Limit	0.8
Upper Explosion Limit	7.0
Extinguishing Media	CARBON DIOXIDE, DRY CHEMICAL, FOAM AND/OR WATER FOG AS EXTINGUISHING MEDIA
Special Fire Fighting Procedures	WEAR NIOSH APPROVED SCBA RESPIRATOR IN THE POSITIVE PRESSURE MODE AND CHEMICAL PROTECTIVE CLOTHING
Unusual Fire/Explosion Hazards	WATER MAY CAUSE FROTHING

SECTION V - Reactivity Data

Stability	YES

Stability Conditions to Avoid	STORE BELOW 150 F. DO NOT APPLY HIGH HEAT OR FLAME TO CONTAINER. KEEP SEPARATE FROM STRONG OXIDIZING AGENTS
Materials to Avoid	STRONG OXIDANTS
Hazardous Decomposition Products	EXCESSIVE HEATING AND/OR INCOMPLETE COMBUSTION WILL PRODUCE CARBON MONOXIDE
Hazardous Polymerization	NO
Polymerization Conditions to Avoid	NR

SECTION VI - Health Hazard Data

Route of Entry: Skin	YES
Route of Entry: Ingestion	YES
Route of Entry: Inhalation	YES
Health Hazards - Acute and Chronic	[EYE] MILD IRRITANT [SKIN] MILD IRRITANT [INGEST] TOXICITY IS RELATIVELY LOW, THERE IS A RISK OF ASPIRATION OF PRODUCT INTO THE LUNGS. ON INGESTION OF LARGE QUANTITIES, SLIGHT GI DISCONFORT, DIARRHEA, AND HEADACHE MAY OCCUR. SMALL DOSES MAY PRODUCE IRRITATION AND DIARRHEA. [INHAL] LOW RISK OF INHALATION
Carcinogenity: NTP	NO
Carcinogenity: IARC	NO
Carcinogenity: OSHA	NO
Explanation of Carcinogenity	NONE
Symptoms of Overexposure	SEE ABOVE [INHAL] LOW RISK OF INHALATION. MISTS ABOVE TLV MAY CAUSE CHEMICAL PNEUMONITIS
Medical Cond. Aggrevated by Exposure	NR
Emergency/First Aid Procedures	[EYE] WASH WITH LARGE QUANTITIES OF WATER AT ROOM TEMPERATURE FOR AT LEAST 15 MIN, OCCASIONALLY LIFT LIDS. GET MEDICAL ATTENTION [SKIN] PROMPTLY WASH WITH SOAP/WATER FOR AT LEAST 15 MINUTES. IF THIS PRODUCT PENETRATES THE CLOTHING, PROMPTLY REMOVE THE CLOTHING AND WASH THE SKIN WITH SOAP AND WATER. [INGEST] DO NOT INDUCE VOMITING, PRODUCT CONTAINS PETROLEUM DISTILLATE. GET MED ATTENTION IMMEDIATELY. [INHAL] MOVE THE EXPOSED PERSON TO FRESH AIR AT ONCE AND CALL EMERGENCY

	MEDICAL CARE. IF BREATHING HAS STOPPED OR DIFFICULT GIVE ARTIFICAL RESPIRATION OR HUMIFIED OXYGEN AS NEEDED

SECTION VII - Precautions for Safe Handling and Use

Steps if Material Released/Spilled	[SMALL] REMOVE SOURCES OF HEAT OR IGNITION, PROVIDE ADEQUATE VENTIALTION, CONTAIN LEAK USING ABSORBENT, INERT, NON-COMBUSTIBLE MATERIAL. [LARGE] CONTAIN SPILL, TRANSFER TO SECURE CONTAINERS. IN THE EVENT OF AN UNCONTROLLED MATERIAL RELEASE, DETERMINE IF THE SPILL IS REPORTABLE UNDER APPLICABLE LAWS AND REGULATIONS
Neutralizing Agent	NR
Waste Disposal Method	DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. BEFORE ATTEMPTING CLEAN-UP, REFER TO OTHER SECTIONS OF MSDS FOR HAZARD WARNING INFORMATION
Handling and Storage Precautions	STORE BELOW 150 F. DO NOT APPLY HIGH HEAT OR FLAME TO CONTAINER. KEEP SEPARATE FROM STRONG OXIDIZING AGENTS
Other Precautions	NR

SECTION VIII - Control Measures

Respiratory Protection	NORMALLY NONE IS REQUIRED. IF HIGH VAPOR OR MIST CONCENTRATION ARE EXPECTED, USE APPROPRIATE NIOSH APPROVED RESPIRATOR FOR ORGANIC VAPORS AND MISTS. RESPIRATORS MUST BE SELECTED BASED ON THE AIRBORNE LEVELS FOUND IN THE WORKPLACE AND MAUST EXCEED THE WORKING LIMITS OF THE RESPIRATOR
Ventilation	LOCAL VENTILATION TO MAINTAIN EXPOSURE LEVELS BELOW RECOMMEDED EXPOSURE LIMITS. IN CONFINED SPACES,
Protective Gloves	USE OIL IMPERVIOUSE GLOVES AS REQUIRED
Eye Protection	SPLASH PROOF CHEMICAL GOGGLES
Other Protective Equipment	

	WEAR BODY COVERING WORK CLOTHES TO AVOID PROLONGED OR REPEATED EXPOSURE
Work Hygenic Practices	USE NORMAL HYGIENE PRACTICES
Supplemental Health/Safety Data	NR

SECTION IX - Label Data

Protect Eye	YES
Protect Skin	YES
Protect Respiratory	YES
Chronic Indicator	NO
Contact Code	SLIGHT
Fire Code	UNKNOWN
Health Code	UNKNOWN
React Code	UNKNOWN
Specific Hazard and Precaution	NO TARGET ORGANS LISTED

SECTION X - Transportation Data

Container Quantity	1
Unit of Measure	QT

SECTION XI - Site Specific/Reporting Information

Volatile Organic Compounds (P/G)	7.5
Volatile Organic Compounds (G/L)	898.7913

SECTION XII - Ingredients/Identity Information

Ingredient #	01
Ingredient Name	ADDITIVE MIXTURE
CAS Number	1002
Proprietary	NO
Percent	5
Ingredient #	02
Ingredient Name	PETROLEUM DISTILLATE
CAS Number	64742536
Proprietary	NO
Percent	95

SAFETY DATA SHEET

STAINLESS STEEL CLEANER & POLISH

Section 1. Chemical product and company identification

Product name : STAINLESS STEEL CLEANER & POLISH

Recommended use and restrictions : Metal Polish

Use only for the purpose on the product label.

Product dilution information : Not applicable

Supplier's information : Ecolab Inc. Institutional Division
370 N. Wabasha Street
St. Paul, MN 55102
1-800-352-5326

Code : 900096-03

Date of issue : **28 Feb 2013**

EMERGENCY HEALTH INFORMATION: 1-800-328-0026
Outside United States and Canada CALL 1-651-222-5352 (in USA)

Section 2. Hazards identification

Product AS SOLD

GHS Classification : FLAMMABLE AEROSOLS. - Category 2
GASES UNDER PRESSURE - Compressed gas
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Narcotic effects] - Category 3

Product AT USE DILUTION

Product is sold ready to use.

GHS label elements

Signal word : Warning

Symbol :

Hazard statements : Flammable aerosol.
Contains gas under pressure; may explode if heated.
May cause drowsiness and dizziness.

Precautionary statements

Prevention : Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Pressurized container: Do not pierce or burn, even after use. Use only outdoors or in a well-ventilated area. Avoid breathing vapor.

Response : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.

Storage : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.

Section 2. Hazards identification

Disposal : See section 13 for waste disposal information.

Other hazards : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Product AS SOLD

Hazardous ingredients	Concentration Range (%)	CAS number
white mineral oil, petroleum	5 - 20	8042-47-5
BUTANE	5 - 20	106-97-8
PROPANE	1 - 5	74-98-6
solvent naphtha (petroleum), medium aliph.	1 - 5	64742-88-7

Product AT USE DILUTION

Hazardous ingredients	Concentration Range (%)	CAS number
Product is sold ready to use.		

Section 4. First aid measures

Product AS SOLD

Eye contact : No known effect after eye contact. Rinse with water for a few minutes.

Skin contact : No known effect after skin contact. Rinse with water for a few minutes.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if you feel unwell.

Ingestion : Get medical attention if symptoms occur.

Product AT USE DILUTION

Product is sold ready to use.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

See toxicological information (section 11)

Section 5. Fire-fighting measures

Product AS SOLD

Suitable fire extinguishing media : Use water spray, fog or foam.

Specific hazards arising from the chemical : Flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Specific fire-fighting methods : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters :

Section 5. Fire-fighting measures

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Product AS SOLD

Personal precautions : Use personal protective equipment as required.

Environmental precautions : Avoid contact of large amounts of spilled material and runoff with soil and surface waterways.

Methods for cleaning up : Use a water rinse for final clean-up.

Product AT USE DILUTION

Product is sold ready to use.

Section 7. Handling and storage

Product AS SOLD

Handling : Store and use away from heat, sparks, open flame or any other ignition source. Liquid and vapor under pressure. Do not puncture, incinerate or store the container at temperatures above 49°C (120°F) or in direct sunlight. Use only with adequate ventilation. Wash thoroughly after handling.

Storage : Keep out of reach of children. Keep container tightly closed and sealed until ready for use. Keep container in a cool, well-ventilated area. Avoid all possible sources of ignition (spark or flame). Do not puncture or incinerate container.

Store between the following temperatures: 5 and 45°C

Product AT USE DILUTION

Product is sold ready to use.

Section 8. Exposure controls/personal protection

Control parameters

Ingredient name	Exposure limits
white mineral oil, petroleum	**ACGIH TLV (United States, 3/2012).** TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction **NIOSH REL (United States, 6/2009).** TWA: 5 mg/m³ 10 hours. Form: Mist STEL: 10 mg/m³ 15 minutes. Form: Mist **OSHA PEL (United States, 6/2010).** TWA: 5 mg/m³ 8 hours.
BUTANE	**ACGIH TLV (United States, 3/2012).** TWA: 1000 ppm 8 hours. **NIOSH REL (United States, 6/2009).** TWA: 800 ppm 10 hours. TWA: 1900 mg/m³ 10 hours.
PROPANE	**ACGIH TLV (United States, 3/2012).** TWA: 1000 ppm 8 hours. **OSHA PEL (United States, 6/2010).** TWA: 1800 mg/m³ 8 hours. TWA: 1000 ppm 8 hours. **NIOSH REL (United States, 6/2009).** TWA: 1000 ppm 10 hours.

Section 8. Exposure controls/personal protection

solvent naphtha (petroleum), medium aliph.	TWA: 1800 mg/m³ 10 hours. **OSHA PEL (United States, 6/2010).** TWA: 100 ppm 8 hours. TWA: 400 mg/m³ 8 hours.

Product AS SOLD

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits.

Product AT USE DILUTION

Product is sold ready to use.

Personal protection

Eye protection : No protective equipment is needed under normal use conditions.

Hand protection : No protective equipment is needed under normal use conditions.

Skin protection : No protective equipment is needed under normal use conditions.

Respiratory protection : A respirator is not needed under normal and intended conditions of product use.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

Section 9. Physical and chemical properties

Product AS SOLD

Physical state : Aerosol

Color : White

Odor : citrus

pH : Not applicable

Flash point : Not applicable

Explosion limits : Lower: 1.8%
Upper: 9.5%

Flammability (solid, gas) : Not available.

Melting point : Not available.

Boiling point : >100°C (>212°F)

Evaporation rate (butyl acetate = 1) : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 0.951 to 0.951 (Water = 1)

Solubility : Soluble in the following materials: cold water and hot water.

Partition coefficient: n-octanol/water : Not available.

Product AT USE DILUTION

Product is sold ready to use.

Section 9. Physical and chemical properties

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Odor threshold : Not available.

Viscosity : Not available.

Aerosol product

Type of aerosol : Spray

Heat of combustion : 6.246 kJ/g

Ignition distance : 0 cm

Flame height : Not available.

Flame duration : Not available.

Section 10. Stability and reactivity

Product AS SOLD

Stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame).

Materials to avoid : Highly reactive or incompatible with the following materials: oxidizing materials.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Route of exposure : Skin contact, Eye contact, Inhalation, Ingestion

Product AS SOLD

Symptoms

Eye contact : No specific data.

Skin contact : No specific data.

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Ingestion : No specific data.

Acute toxicity

Eye contact : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness.

Ingestion : Can cause central nervous system (CNS) depression.

Product AT USE DILUTION

Product is sold ready to use.

Toxicity data

Product/ingredient name	Result	Species	Dose

Section 11. Toxicological information

white mineral oil, petroleum	LC50 Inhalation Dusts and mists	Rat	>5.2 mg/l
	LD50 Dermal	Rabbit	>2000 mg/kg
	LD50 Oral	Rat	>5000 mg/kg
butane	LC50 Inhalation Gas.	Rat	280000 ppm
solvent naphtha (petroleum), medium aliph.	LD50 Dermal	Rabbit	>2000 mg/kg
	LD50 Oral	Rat	>5000 mg/kg

Chronic toxicity

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Section 12. Ecological information

Product AS SOLD

Ecotoxicity : No known significant effects or critical hazards.

Aquatic and terrestrial toxicity

Product/ingredient name	Result	Species	Exposure
white mineral oil, petroleum	Acute LC50 <100 mg/l	Fish	96 hours
butane	Acute LC50 22.03 mg/l	Fish	96 hours
solvent naphtha (petroleum), medium aliph.	Acute LC50 800 mg/l	Fish	96 hours

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Product AS SOLD

Disposal methods : Avoid disposal. Attempt to use product completely in accordance with intended use. Disposal should be in accordance with applicable regional, national and local laws and regulations. Do not puncture or incinerate container. Discard empty container in trash.

RCRA classification : Unused product is D001 (Ignitable)

Product AT USE DILUTION

Product is sold ready to use.

Section 14. Transport information

Certain shipping modes or package sizes may have exceptions from the transport regulations. The classification provided may not reflect those exceptions and may not apply to all shipping modes or package sizes.

DOT

DOT Classification	UN1950
DOT Proper shipping name	Aerosols
Class	2.1
Packing group	-

IMO/IMDG

IMO/IMDG Classification	UN1950
IMO/IMDG Proper shipping name	AEROSOLS
Class	2.1
Packing group	-

For transport in bulk, see shipping documents for specific transportation information.

Section 14. Transport information

Product AT USE DILUTION

Not intended for transport.

Section 15. Regulatory information

Product AS SOLD

U.S. Federal regulations

TSCA 8(b) inventory : All components are listed or exempted.

SARA 302/304/311/312 extremely hazardous substances: No listed substance

SARA 302/304 emergency planning and notification: No listed substance

SARA 313	Product name	CAS number	Concentration
Form R - Reporting requirements :	No listed substance		

California Prop. 65 : No listed substance

Section 16. Other information

Product AS SOLD

Hazardous Material Information System (U.S.A.) :

Health	*	1
Flammability		2
Physical hazards		0

National Fire Protection Association (U.S.A.) :

NFPA Aerosol Level : **Level 1**

Date of issue : **28 Feb 2013**

Prepared by : Regulatory Affairs
1-800-352-5326

Notice to reader

The above information is believed to be correct with respect to the formula used to manufacture the product in the country of origin. As data, standards, and regulations change, and conditions of use and handling are beyond our control, NO WARRANTY, EXPRESS OR IMPLIED, IS MADE AS TO THE COMPLETENESS OR CONTINUING ACCURACY OF THIS INFORMATION.

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

NAME: STAINLESS STEEL POLISH
USE: STAINLESS STEEL CLEANER & POLISH

MSDS # 100055D

U S CHEMICAL, 316 HART STREET, WATERTOWN, WI 53094 USA
MEDICAL EMERGENCY #: 1-800-851-7145 EXT. 075 USA
SPILL EMERGENCY #: 1-800-424-9300 USA
PRODUCT INFORMATION #: 1-800-558-9566 (8 A.M. TO 5 P.M. CST MONDAY TO FRIDAY)
INTERNET ADDRESS: WWW.USCHEMICAL.COM
REVIEWED 7-12-07 REVISED 7-12-07 SECTION REVISED: 1

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: CAUTION! COMBUSTIBLE LIQUID. MAY BE MODERATELY IRRITATING TO EYES AND SKIN.

PRINCIPLE ROUTES OF EXPOSURE: EYES, SKIN, INGESTION, INHALATION.

POTENTIAL ACUTE HEALTH EFFECTS

EYES: MAY BE MODERATELY IRRITATING TO EYES.

SKIN: MAY BE MODERATELY IRRITATING TO SKIN.

INHALATION: MAY BE IRRITATING TO NOSE, THROAT AND RESPIRATORY TRACT.

INGESTION: MAY BE IRRITATING TO MOUTH, THROAT AND STOMACH. MAY CAUSE ABDOMINAL DISCOMFORT, NAUSEA, VOMITING AND DIARRHEA.

MEDICAL CONDITIONS AGGRAVATED: PERSONS WITH PRE-EXISTING SKIN DISORDERS MAY BE MORE SUSCEPTABLE TO IRRITATING EFFECTS.

3. COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENT	CAS #	% BY WT	LC50/LD50
PETROLEUM SOLVENT	64742-48-9	30.0	N.AV.
MINERAL OIL	8042-47-5	30.0	N.AV.
N-METHYLPYRROLIDONE	872-50-4	1.0 – 5.0	N.AV.

STATE RIGHT TO KNOW: THIS PRODUCT CONTAINS:
WATER/7732-18-5, PETROLEUM SOLVENT/64742-48-9, MINERAL OIL/8042-47-5, AMINOMETHYL PROPANOL OLEATE/68478-78-4, N-METHYLPYRROLIDONE/872-50-4

4. FIRST AID MEASURES

EYES: FLOOD WITH LUKEWARM (NOT HOT) WATER POURED FROM A LARGE GLASS 2 OR 3 INCHES FROM EYES. REMOVE CONTACTS. HAVE PATIENT BLINK AS MUCH AS POSSIBLE WHILE FLOODING THE EYES. CONTINUE FOR AT LEAST 15 MINUTES.
SKIN: REMOVE CONTAMINATED CLOTHES, THEN FLOOD WITH WATER.
INHALATION: MOVE VICTIM TO FRESH AIR. GIVE ARTIFICIAL RESPIRATION IF PATIENT IS NOT BREATHING.
INGESTION: DO NOT INDUCE VOMITING. IF PATIENT IS CONSCIOUS AND CAN SWALLOW, ADMINISTER MILK OR WATER.
ADMINISTER FIRST AID TREATMENT AS STATED ABOVE, THEN CALL 1-800-851-7145 EXT. 075 OR CONTACT PHYSICIAN FOR FURTHER MEDICAL INSTRUCTIONS.

NOTE TO PHYSICIAN: CALL 1-800-851-7145 EXT. 075 FOR ASSISTANCE WITH THE MANAGEMENT OF EXPOSURES.

5. FIRE-FIGHTING MEASURES

FLAMMABILITY: COMBUSTIBLE
FLASH POINT: 138°F TCC
PRODUCTS OF COMBUSTION: SEE SECTION 10.
SUITABLE EXTINGUISHING MEDIA: FOR FIRES IN AREA, USE APPROPRIATE MEDIA. USE DRY CHEMICAL OR ALCOHOL FOAM.
SPECIFIC HAZARDS: A VAPOR ACCUMULATION MAY FLASH IF IGNITED.
SPECIFIC METHODS: SOLVENT FIRE-FIGHTING PROCEDURES MAY BE USED.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: SEE SECTION 8. PUT ON APPROPRIATE PPE.
SPILL RESPONSE: ELIMINATE ALL IGNITION SOURCES. EVACUATE UNPROTECTED PERSONNEL FROM AREA. WEAR PROPER PROTECTIVE EQUIPMENT INCLUDING RUBBER BOOTS. VENTILATE AREA IF NEEDED. STOP LEAK IF YOU CAN DO SO WITHOUT RISK. DIKE OR DAM LARGE SPILLS. AVOID DIRECT DISCHARGE TO SEWER AND SURFACE WATERS. PUMP TO CONTAINER OR SOAK UP WITH NON-COMBUSTIBLE INERT ABSORBENT MATERIALS. AFTER SPILL COLLECTION, FLUSH AREA WITH WATER AND FOLLOW WITH NORMAL CLEAN-UP PROCEDURES. WASH CONTAMINATED CLOTHING AND FOOTWEAR BEFORE RE-USE. BE CAREFUL AS SPILLS ARE SLIPPERY.

7. HANDLING AND STORAGE

HANDLING: FOLLOW ALL LABEL DIRECTIONS. INSTRUCT PERSONNEL ABOUT PROPER USE, HAZARDS, PRECAUTIONS, AND FIRST AID MEASURES.
USE IN WELL-VENTILATED AREAS. AVOID BREATHING VAPORS OR MISTS.
AVOID INGESTION AND CONTACT WITH EYES. DO NOT TASTE OR SWALLOW.
REMOVE AND WASH CONTAMINATED CLOTHING AND FOOTWEAR BEFORE RE-USE.
PRODUCT RESIDUE MAY REMAIN ON OR IN EMPTY CONTAINERS.
HANDLE CAREFULLY TO AVOID DAMAGING CONTAINER.

STORAGE: ROTATE STOCK REGULARLY. KEEP CONTAINER CLOSED WHEN NOT IN USE. AVOID TEMPERATURES BELOW 35°F OR ABOVE 120°F. KEEP AWAY FROM HEAT, SPARK AND FLAME. PROTECT FROM FREEZING. STORAGE AT AMBIENT TEMPERATURES IN A DRY AREA OUT OF DIRECT SUNLIGHT IS RECOMMENDED. KEEP AWAY FROM FOOD AND DRINK. KEEP OUT OF CHILDREN'S REACH.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS:
MINERAL OIL MIST = 5 MG/M3 TWA (ACGIH/OSHA), 10 MG/M3 TWA (ACGIH)
ENGINEERING CONTROLS: NONE REQUIRED. GENERAL ROOM VENTILATION IS ADEQUATE.

PERSONAL PROTECTION
EYES: SAFETY GLASSES WITH SIDE SHIELDS RECOMMENDED IF SPRAYING.
HANDS: FOR PROLONGED OR REPEATED CONTACT WITH SKIN: RUBBER GLOVES.
RESPIRATORY: N.AP.
FEET: N.AP.
BODY: N.AP.

9. PHYSICAL AND CHEMICAL PROPERTIES

COLOR: OPAQUE WHITE
ODOR : SPEARMINT
pH CONCENTRATE: 9.5
pH @ 2500 PPM SOLUTION: N.AP.
pH @ USE DILUTION: N.AP.
PHYSICAL STATE: LIQUID
SPECIFIC GRAVITY: 0.875
VISCOSITY: VISCOUS
BOILING POINT: N.AP.
MELTING POINT: N.AP.

FLASH POINT: 138°F TCC
UEL: N.AV.
LEL: N.AV.
EVAPORATION RATE: N.AP.
ODOR THRESHOLD: N.AP
VAPOR PRESSURE: N.AP
VAPOR DENSITY: N. AP.
COEFF. OIL/WATER: N.AP.
WATER SOLUBILITY: COMPLETE
OTHER: N.AP.

10. STABILITY AND REACTIVITY

STABLE: YES
CONDITIONS TO AVOID: AVOID TEMPERATURES BELOW 35°F.
AVOID HEAT, SPARKS AND FLAME.

MATERIALS TO AVOID: AVOID MIXING DIRECTLY WITH ANY OTHER CLEANING PRODUCT. AVOID OXIDIZING AGENTS. MIX ONLY WITH WATER.

DECOMPOSITION PRODUCTS: FIRE OR MIXING WITH INCOMPATIBLE MATERIALS MAY PRODUCE OXIDES OF CARBON AND OTHER TOXIC OR IRRITATING FUMES.

POSSIBILITY OF HAZARDOUS REACTIONS: N.AP.

11. TOXICOLOGICAL INFORMATION

ACUTE EFFECTS: SEE SECTION 2.
CHRONIC EFFECTS: NONE KNOWN. NO REPORTABLE CARCINOGENS, MUTAGENS, SENSITIZERS, SYNERGISTIC MATERIALS, TERATOGENS, OR REPRODUCTIVE TOXINS.
LC50/LD50: N.AV.
TARGET ORGANS: EYES, SKIN, RESPIRATORY SYSTEM.
OTHER TOXIC EFFECTS: NONE KNOWN.

12. ECOLOGICAL INFORMATION

NOT AVAILABLE.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: UNDILUTED PRODUCT WITH FLASH POINT BELOW 140 F IS REGULATED UNDER ENVIRONMENTAL AND TRANSPORTATION LAWS AS AN IGNITABLE WASTE (RCRA CLASS D001). COMPLY WITH ALL FEDERAL, STATE, PROVINCIAL AND LOCAL LAWS AND REGULATIONS. CONSULT STATE AND LOCAL AUTHORITIES FOR RESTRICTIONS ON DISPOSAL OF CHEMICAL WASTE. MANAGE CHEMICAL WASTES THROUGH AN APPROVED WASTE TREATMENT FACILITY. DO NOT REUSE EMPTY CONTAINER. RINSE EMPTY CONTAINER THOROUGHLY WITH WATER BEFORE DISCARDING CONTAINER IN ACCORDANCE WITH CURRENT LOCAL COMMUNITY CODES. PLEASE RECYCLE EMPTY CONTAINER WHENEVER POSSIBLE.

14. TRANSPORT INFORMATION

DOT/TDG: NOT REGULATED (COMBUSTIBLE EXCEPTION).
DOT RQ: N.AP.
DOT ERG #: N.AP.

15. REGULATORY INFORMATION

EPA CERCLA RQ: N.AP.
EPA REGISTERED: NO
EPA %VOC: 27.4
EPA VOC RULE: PRODUCT COMPLIES WITH THE EPA VOC EMISSIONS STANDARD.
OSHA HAZARDOUS: YES
PHOSPHORUS CONTENT: 0.00%
PROPOSITION 65: N.AP.
SARA 311/312 HAZARDS: ACUTE, FIRE
SARA 313 CHEMICALS: YES
STATE RIGHT TO KNOW: SEE SECTION 3 FOR STATE RTK CHEMICAL NAMES.
TSCA INVENTORY STATUS: ALL COMPONENTS ARE LISTED ON THE INVENTORY.
WHMIS CLASS: D-2B, B-3

16. OTHER INFORMATION

NFPA RATING: HEALTH-2/FLAMMABILITY-2/REACTIVITY-0/SPECIAL HAZARD-N.AP.
HMIS RATING: HEALTH-2/FLAMMABILITY-2/REACTIVITY-0/PERSONAL PROTECTION-SEE 8.0

N.AV. = NOT AVAILABLE N.AP. = NOT APPLICABLE PREPARED BY: HEALTH AND SAFETY

NOTICE TO READER

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MATERIAL SAFETY DATA SHEET

Section 1: Product & Company Identification

Product Name: **Lithium General Purpose Grease**

Product Number (s): **SL3310, SL3311, SL3315, SL3317, 8SL3310**

Product Use: Lubricating grease

Manufacturer / Supplier Contact Information:

In United States:
CRC Industries, Inc.
885 Louis Drive
Warminster, PA 18974
www.crcindustries.com
1-215-674-4300(General)
(800) 521-3168 (Technical)
(800) 272-4620 (Customer Service)

In Canada:
CRC Canada Co.
2-1246 Lorimar Drive
Mississauga, Ontario L5S 1R2
www.crc-canada.ca
1-905-670-2291

In Mexico:
CRC Industries Mexico
Av. Benito Juárez 4055 G
Colonia Orquídea
San Luís Potosí, SLP CP 78394
www.crc-mexico.com
52-444-824-1666

24-Hr Emergency – CHEMTREC: (800) 424-9300 or (703) 527-3887

Section 2: Hazards Identification

Emergency Overview

As defined by OSHA's Hazard Communication Standard, this product is non-hazardous.
Appearance & Odor: Amber semi-solid to solid grease with a faint petroleum odor

Potential Health Effects:

ACUTE EFFECTS:

EYE: May cause irritation.

SKIN: Repeated or prolonged contact can result in drying of the skin.

INHALATION: Heating can generate vapors that may cause respiratory irritation, nausea, and headaches. Inhalation hazard at room temperature is unlikely due to the low volatility of this product.

INGESTION: Can cause stomach ache and vomiting. Main hazard, if ingested, is aspiration into the lungs and subsequent pneumonitis.

CHRONIC EFFECTS: Unknown

TARGET ORGANS: None known

Medical Conditions Aggravated by Exposure: skin or respiratory conditions

See Section 11 for toxicology and carcinogenicity information on product ingredients.

Section 3: Composition/Information on Ingredients

COMPONENT	CAS NUMBER	% by Wt.
Refined heavy naphthenic distillates	64741-96-4 / 64742-52-5	85 - 95
Lithium 12-hydroxystearate	7620-77-1	3 – 7

Section 4: First Aid Measures

Eye Contact: Immediately flush with plenty of water for 15 minutes. Call a physician if irritation persists.

Skin Contact: Remove contaminated clothing and wash affected area with soap and water. Call a physician if irritation persists. Wash contaminated clothing prior to re-use.

Inhalation: Remove person to fresh air. Keep person calm. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Call a physician.

Ingestion: Do not induce vomiting. Seek medical attention.

Note to Physicians: Treat symptomatically.

Section 5: Fire-Fighting Measures

Flammable Properties: As defined by OSHA, this product is nonflammable.

Flash Point: 450°F (COC) Upper Explosive Limit: ND
Autoignition Temperature: ND Lower Explosive Limit: ND

Fire and Explosion Data:

Suitable Extinguishing Media: CO_2, dry chemical, sand, dolomite, alcohol resistant foam, water spray

Products of Combustion: Oxides of carbon

Explosion Hazards: Containers, when exposed to heat from fire, may build pressure and rupture.

Protection of Fire-Fighters: Firefighters should wear self-contained, NIOSH-approved breathing apparatus for protection against suffocation and possible toxic decomposition products. Proper eye and skin protection should be provided. Use water spray to keep fire-exposed containers cool and to knock down vapors which may result from product decomposition. Avoid water in straight hose stream as it will scatter and spread fire.

Section 6: Accidental Release Measures

Personal Precautions: Use personal protection recommended in Section 8. Minimize skin contact

Environmental Precautions: Take precautions to prevent contamination of ground and surface waters. Do not flush into sewers or storm drains. Advise authorities if product has entered waterways.

Methods for Containment & Clean-up: Ventilate the area with fresh air. If in confined space or limited air circulation area, clean-up workers should wear appropriate respiratory protection. Wipe up spilled material. Place used absorbents into proper waste containers.

Section 7: Handling and Storage

Handling Procedures: Keep container away from heat, sparks, and open flame. High temperatures may produce irritating vapors. Eye wash station should be available at work place. Keep containers closed when not in use. Ventilate well, especially in warmer environments. For product use instructions, please see the product label.

Storage Procedures: Store in a cool dry area out of direct sunlight. Containers should be tightly closed while in storage. Store separated from acids, and oxidizing materials. Store away from sparks and open flame.

Aerosol Storage Level: NA

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines:

	OSHA		ACGIH		OTHER		
COMPONENT	TWA	STEL	TWA	STEL	TWA	SOURCE	UNIT
Refined naphthenic distillate	5*	NE	5*	10*	NE		mg/m^3
Lithium 12-hydroxystearate	NE	NE	NE	NE	NE		
N.E. – Not Established	(c) – ceiling		(s) – skin		(v) – vacated	* – oil mist	

Controls and Protection:

Engineering Controls: Area should have ventilation to provide fresh air. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at the source, preventing dispersion into the general work area. Use mechanical means if necessary to maintain vapor levels below the exposure guidelines. If working in a confined space, follow applicable OSHA regulations.

Respiratory Protection: None required for normal work where adequate ventilation is provided. If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with organic vapor cartridge. Air monitoring is needed to determine actual employee exposure levels. Use a self-contained breathing apparatus in confined spaces and for emergencies.

Eye/face Protection: For normal conditions, wear safety glasses.

Skin Protection: Use protective gloves such as neoprene or nitrile. Also, use full protective clothing if there is prolonged or repeated contact of material with skin.

Section 9: Physical and Chemical Properties

Physical State: semi-solid grease
Color: amber
Odor: mild petroleum
Odor Threshold: ND
Specific Gravity: 0.90 @ 60℉
Initial Boiling Point: ND
Freezing Point: ND
Vapor Pressure: < 0.1 mmHg @ 68℉
Vapor Density: > 5 (air = 1)
Evaporation Rate: very slow

Solubility: insoluble in water
Coefficient of water/oil distribution: ND
pH: NA
Volatile Organic Compounds: wt %: < 0.1 g/L: < 0.9 lbs./gal: < 0.01

Section 10: Stability and Reactivity

Stability: Stable

Conditions to Avoid: Heat

Incompatible Materials: Avoid contact with acids and oxidizing substances.

Hazardous Decomposition Products: Oxides of carbon

Possibility of Hazardous Reactions: No

Section 11: Toxicological Information

Long-term toxicological studies have not been conducted for this product. The following information is available for components of this product.

Acute Toxicity:

Component	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 (rat)
Refined naphthenic distillate	> 5000 mg/kg	> 2000 mg/kg	2.18 mg/L/4H
Lithium 12-hydroxystearate	No data	No data	No data

Chronic Toxicity:

Component	OSHA Carcinogen	IARC Carcinogen	NTP Carcinogen	Irritant	Sensitizer
Refined naphthenic distillate	No	No	No	Unknown	Unknown
Lithium 12-hydroxystearate	No	No	No	Unknown	Unknown

E – Eye S – Skin R - Respiratory

Reproductive Toxicity: No information available
Teratogenicity: No information available
Mutagenicity: No information available
Synergistic Effects: No information available
Other: Naphthenic distillates: Base oils of this product contain < 3% DMSO Extractable total polycyclic aromatic compound (PAC) per IP 346.

Section 12: Ecological Information

Ecological studies have not been conducted for this product. The following information is available for components of this product.

Ecotoxicity: Naphthenic distillates: 48 Hr EC50 Daphnia magna: >1000 mg/L
Persistence / Degradability: No information available
Bioaccumulation / Accumulation: No information available
Mobility in Environment: No information available

Section 13: Disposal Considerations

Waste Classification: This product is not a RCRA hazardous waste. (See 40 CFR Part 261.20 – 261.33)
Empty containers may be recycled.

All disposal activities must comply with federal, state, provincial and local regulations. Local regulations may be more stringent than state, provincial or national requirements.

Section 14: Transport Information

US DOT (ground): Not Regulated

ICAO/IATA (air): Not Regulated

IMO/IMDG (water): Not Regulated

Special Provisions: None

Section 15: Regulatory Information

U.S. Federal Regulations:

Toxic Substances Control Act (TSCA):
All ingredients are either listed on the TSCA inventory or are exempt.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA):
Reportable Quantities (RQ's) exist for the following ingredients: None

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Superfund Amendments Reauthorization Act (SARA) Title III:
Section 302 Extremely Hazardous Substances (EHS): None

Section 311/312 Hazard Categories:	Fire Hazard	No
	Reactive Hazard	No
	Release of Pressure	No
	Acute Health Hazard	No
	Chronic Health Hazard	No

Section 313 Toxic Chemicals: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:
None

Clean Air Act:
Section 112 Hazardous Air Pollutants (HAPs): None

U.S. State Regulations:

California Safe Drinking Water and Toxic Enforcement Act (Prop 65):
This product may contain the following chemicals known to the state of California to cause cancer, birth defects or other reproductive harm: None

Consumer Products VOC Regulations: This product is not regulated.

State Right to Know:
New Jersey: None
Pennsylvania: None
Massachusetts: None
Rhode Island : None

Canadian Regulations:

Controlled Products Regulations:
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

WHMIS Hazard Class: None

Canadian DSL Inventory: All ingredients are either listed on the DSL Inventory or are exempt.

European Union Regulations:

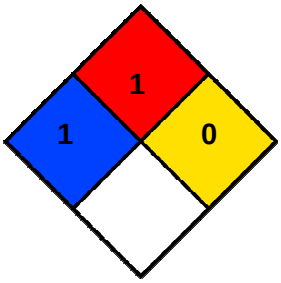
RoHS Compliance: This product is compliant with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003. This product does not contain any of the restricted substances as listed in Article 4(1) of the RoHS Directive.

Additional Regulatory Information: None

Section 16: Other Information

HMIS® (II)	
Health:	**1**
Flammability:	**1**
Reactivity:	**0**
PPE:	**B**

NFPA



Ratings range from 0 (no hazard) to 4 (severe hazard)

Prepared By: Michelle Rudnick
CRC #: 2020
Revision Date: 03/16/2009

Changes since last revision: MSDS reformatted to meet the requirements of the Canadian Controlled Products Regulations.

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this MSDS consult your supervisor, a health & safety professional, or CRC Industries.

ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Service
CFR: Code of Federal Regulations
DOT: Department of Transportation
DSL: Domestic Substance List
g/L: grams per Liter
HMIS: Hazardous Materials Identification System
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods
IMO: International Maritime Organization
lbs./gal: pounds per gallon
LC: Lethal Concentration
LD: Lethal Dose
NA: Not Applicable
ND: Not Determined
NIOSH: National Institute of Occupational Safety & Health
NFPA: National Fire Protection Association
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PMCC: Pensky-Martens Closed Cup
PPE: Personal Protection Equipment
ppm: Parts per Million
RoHS: Restriction of Hazardous Substances
STEL: Short Term Exposure Limit
TCC: Tag Closed Cup
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Information System

FLINN SCIENTIFIC INC.

"Your Safer Source for Science Supplies"

Material Safety Data Sheet (MSDS)

MSDS #: 777.00
Revision Date: May 20, 2002

Section 1 — Chemical Product and Company Identification

Stannous Chloride Solution

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Section 2 — Composition, Information on Ingredients

Stannous Chloride (10025-69-1) 2-23%, Hydrochloric Acid (7647-01-0) 1-18%, Water (7732-18-5) 65-97%

CAS#: None Established

Section 3 — Hazards Identification

Clear, colorless, odorless liquid.
Moderately toxic by ingestion and inhalation. Corrosive to body tissues. Avoid all body tissue contact.

FLINN AT-A-GLANCE
Health-2
Flammability-0
Reactivity-0
Exposure-2
Storage-0

0 is low hazard, 3 is high hazard

Section 4 — First Aid Measures

Call a physician, seek medical attention for further treatment, observation and support after first aid.
Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.
Eye: Immediately flush with fresh water for 15 minutes.
External: Wash continuously with fresh water for 15 minutes.
Internal: Give 1 to 2 cups of water or milk, followed by a gastric antacid, such as milk of magnesia. Do not induce vomiting. Call a physician or poison control at once.

Section 5 — Fire Fighting Measures

Non flammable liquid.

NFPA CODE
None established

Section 6 — Accidental Release Measures

Restrict unprotected personnel from area and ventilate area. Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

Section 7 — Handling and Storage

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates.

Section 8 — Exposure Controls , Personal Protection

Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, chemical-resistant gloves and chemical-resistant apron.

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Section 9 — Physical and Chemical Properties

Clear, colorless liquid. Odorless.

Section 10 — Stability and Reactivity

Shelf Life: Good.

Section 11 — Toxicological Information

Acute effects: Corrosive
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD50: N.A.
IHL-RAT LC50: N.A.
SKN-RBT LD50: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

Section 12 — Ecological Information

Data not yet available.

Section 13 — Disposal Considerations

Please consult with state and local regulations.
Flinn Suggested Disposal Method #26b is one option.

Section 14 — Transport Information

Shipping Name: Not regulated
Hazard Class: N/A
UN Number: N/A

N/A = Not applicable

Section 15 — Regulatory Information

Not listed.

Section 16 — Other Information

Consult your copy of the Flinn Scientific Catalog/Reference Manual for additional information about laboratory chemicals. This Material Safety Data Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. Flinn Scientific Inc. assumes no legal responsibility for use or reliance upon this data.

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"Your Safer Source for Science Supplies"

Flinn MSDS Prevent Chemical Accidents

flinn@flinnsci.com www.flinnsci.com
P.O. Box 219 Batavia IL 60510
(800) 452-1261 Fax (866) 452-1436

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FLINN SCIENTIFIC INC.

"Your Safer Source for Science Supplies"

Material Safety Data Sheet (MSDS)

MSDS #: 776.00
Revision Date: May 22, 2001

Section 1 — Chemical Product and Company Identification

Stannous Chloride

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Section 2 — Composition, Information on Ingredients

Stannous Chloride, dihydrate
Synonym: tin (II) chloride
CAS#: 10025-69-1

Section 3 — Hazards Identification

White powder and chunks. Slight chlorine odor.
Moderately toxic by ingestion and inhalation. Corrosive to body tissues. Avoid all body tissue contact.

FLINN AT-A-GLANCE
Health-2
Flammability-0
Reactivity-1
Exposure-2
Storage-1

0 is low hazard, 3 is high hazard

Section 4 — First Aid Measures

Call a physician, seek medical attention for further treatment, observation and support after first aid.
Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.
Eye: Immediately flush with fresh water for 15 minutes.
External: Wash continuously with fresh water for 15 minutes.
Internal: Give 1 to 2 cups of water or milk, followed by a gastric antacid, such as milk of magnesia. Do not induce vomiting. Call a physician or poison control at once.

Section 5 — Fire Fighting Measures

Non flammable solid.
When heated to decomposition, emits toxic fumes of hydrogen chloride and stannic oxide.
Fire Fighting Instructions: Use triclass, dry chemical fire extinguisher. Firefighters should wear PPE and SCBA with full facepiece operated in positive pressure mode.

NFPA CODE
None established

Section 6 — Accidental Release Measures

Restrict unprotected personnel from area. Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

Section 7 — Handling and Storage

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Store in a cool, dry place. Deliquescent, store in Flinn Chem-Saf bag. Keep container tightly closed.
Use and dispense in a hood.

Section 8 — Exposure Controls , Personal Protection

Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, chemical-resistant gloves and chemical-resistant apron.Use ventilation to keep airborne concentrations below exposure limits. Always wear a NIOSH-approved respirator with proper cartridges or a positive pressure, air-supplied respirator when handling this material in emergency situations (spill or fire).
Exposure guidelines: TWA 2 mg/m3 (Sn) (ACGIH)

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Section 9 — Physical and Chemical Properties

White powder and chunks. Slight chlorine odor.
Solubility: Water, alkalies and alcohol.
Formula: SnCl2 2H2O
Formula Weight: 225.65

Specific Gravity: 2.71
Melting Point: 37.7 C
Boiling Point: 652 C

Section 10 — Stability and Reactivity

Avoid contact with strong bases, strong oxidizers, sodium, potassium, hydrogen peroxide.
Shelf life: Poor.

Section 11 — Toxicological Information

Acute effects: Toxic, corrosive
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD50: 700 mg/kg
IHL-RAT LC50: N.A.
SKN-RBT LD50: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

Section 12 — Ecological Information

Data not yet available.

Section 13 — Disposal Considerations

Please consult with state and local regulations.
Flinn Suggested Disposal Method #26a is one option.

Section 14 — Transport Information

Shipping Name: Not regulated
Hazard Class: N/A
UN Number: N/A

N/A = Not applicable

Section 15 — Regulatory Information

TSCA-listed, EINECS-listed (231-868-0).

Section 16 — Other Information

Consult your copy of the Flinn Scientific Catalog/Reference Manual for additional information about laboratory chemicals. This Material Safety Data Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. Flinn Scientific Inc. assumes no legal responsibility for use or reliance upon this data.

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Flinn MSDS Prevent Chemical Accidents

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(800) 452-1261 Fax (866) 452-1436

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MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI, Canadian WHMIS Standards and European Union Directives

PART I *What is the material and what do I need to know in an emergency?*

1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED): **STAR*TRON GASOLINE ADDITIVE**
CHEMICAL NAME/CLASS: Petroleum Distillate/Organic Compound Mixture
PRODUCT USE: Gasoline Additive
PRODUCT NUMBER: 93008, 93016, 93032
MANUFACTURER'S NAME: **STAR BRITE**
U.S. ADDRESS: 4041 S.W. 47 Avenue
Ft. Lauderdale, FL 33314
U.S. EMERGENCY PHONE: Chemtrec
(800) 424-9300 or (703) 527-3887

U.S. INFORMATION PHONE: (954) 587-6280
INTERNATIONAL ADDRESS:

INTERNATIONAL EMERGENCY PHONE:
INTERNATIONAL BUSINESS PHONE:
REVISION DATE: October 7, 2006 Replaces: June 1, 2006

2. COMPOSITION and INFORMATION ON INGREDIENTS

EU LABELING AND CLASSIFICATION: This product meets the definition of the hazard class of Harmful, as defined by the European Economic Community Guidelines.

EU CLASSIFICATION: [Xn] Harmful.
EU RISK PHRASES: [R: 65]: Harmful, may cause lung damage if swallowed.
EU SAFETY PHRASES: [S: 2-]: Keep out of the reach of children. *(This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only).* [S: 23]: Do not breathe fumes, vapors or spray. [S: 62]: If swallowed, do not induce vomiting. Seek medical advice immediately and show this container or label.

CHEMICAL NAME	CAS #	EINECS #	% w/v	EU CLASSIFICATION FOR COMPONENTS
Proprietary Organic Compounds			< 0.5	HAZARD CLASSIFICATION: Not applicable. RISK PHRASES: Not applicable.
Solvent Naphtha (Petroleum), Heavy Aliphatic	64742-96-7	265-200-4	> 95	HAZARD CLASSIFICATION: Xn [Harmful] RISK PHRASES: R: 65

See Section 15 for full EU classification information of product and components.

NOTE: ALL Canadian WHMIS required information is included in appropriate sections based on the ANSI Z400.1-1998 format. This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR. The MSDS is also prepared to include all European Union required information under EU Directives.

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: This product is a clear, colorless liquid with a mild, paraffin-like odor. **Health Hazards:** Inhalation overexposures to mists or sprays of this product can cause central nervous system effects. Severe inhalation exposures may be fatal. Skin contact may cause allergic reaction. **Flammability Hazards:** This product is combustible and may ignite if heated at or above its flash point of 65.5-73.8°C (150-165°F). If involved in a fire, this product will produce irritating and toxic materials such as various carbon oxides, hydrocarbons and aldehydes. **Reactivity Hazards:** This product is not reactive. **Environmental Hazards:** This material may be harmful or fatal to contaminated plant, animal, and aquatic life. **Emergency Recommendations:** Emergency responders must wear the personal protective equipment suitable for the situation to which they are responding.

3. HAZARD IDENTIFICATION (Continued)

SYMPTOMS OF OVEREXPOSURE BY ROUTE OF EXPOSURE: The most significant routes of occupational overexposure are inhalation and contact with skin and eyes. The symptoms of overexposure to this product are described on the following page.

INHALATION: Due to the high vapor pressure of the main component, formation of mists or sprays of this product are unlikely, unless the product is heated or used in a manner to produce sprays. If this product inhaled, fume, mists or sprays can mildly irritate the respiratory system and cause coughing, sneezing, and difficulty breathing. Depending on the concentration and duration of exposure, inhalation overexposure can cause central nervous system depression, including dizziness, headache, nausea, fatigue, vomiting and incoordination. Severe inhalation overexposure (as may occur in a confined space with inadequate ventilation) may cause unconsciousness and death.

CONTACT WITH SKIN or EYES: Skin contact can cause mild to moderate irritation, depending on the duration and concentration of exposure. Symptoms of such overexposure may cause redness and irritation. Prolonged or repeated skin contact with this product may cause dermatitis (dry, red, scaly skin). Eye contact with this product may cause irritation, redness, and watering.

SKIN ABSORPTION: The components of this product are not known to be absorbed through intact skin.

INGESTION: Ingestion is not anticipated to be a significant route of exposure for any component of this product. If this product is swallowed, it may cause nausea, vomiting, and diarrhea. A significant hazard associated with ingestion of this product is aspiration; breathing this material into the lungs can cause severe lung irritation and tissue damage, which can cause chemical pneumonia or pulmonary edema (life-threatening lung conditions).

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

HEALTH HAZARD	(BLUE)	2
FLAMMABILITY HAZARD	(RED)	2
PHYSICAL HAZARD	(ORANGE)	0

PROTECTIVE EQUIPMENT

EYES	RESPIRATORY	HANDS	BODY
	SEE SECTION 8		SEE SECTION 8

For Routine Industrial Use and Handling Applications

See Section 16 for Definition of Ratings

INJECTION: Injection of this product (as may occur if skin is punctured by a contaminated object) can cause pain, redness, and local swelling.

HEALTH EFFECTS OR RISKS FROM EXPOSURE: An Explanation in **Lay Terms**. In the event of overexposure, the following symptoms may be observed:

ACUTE: Inhalation of fumes, mists or sprays can cause adverse effects on the central nervous system. Severe inhalation overexposure may cause unconsciousness and death. A significant hazard associated with ingestion of this product is aspiration; breathing this material into the lungs can cause severe lung irritation and tissue damage, which can cause chemical pneumonia or pulmonary edema (life-threatening lung conditions).

CHRONIC: Repeated skin contact with this product may cause dermatitis (dry, red, scaly skin). See Section 11 (Toxicology Information) for additional data.

TARGET ORGANS: ACUTE: Skin, eyes, central nervous system. CHRONIC: Skin.

PART II *What should I do if a hazardous situation occurs?*

4. FIRST-AID MEASURES

Contaminated individuals must be taken for medical attention. Rescuers should be taken for medical attention, if necessary. Take a copy of label and MSDS to health professional with the contaminated individual.

SKIN EXPOSURE: If this product contaminates the skin, immediately begin decontamination with running water and soap. Minimum flushing is for 15 minutes. Remove exposed or contaminated clothing, taking care not to contaminate eyes. The contaminated individual must seek immediate medical attention if any adverse health effect occurs.

EYE EXPOSURE: If this product's liquid or vapors enter the eyes, open the contaminated individual's eyes while under gently running water. Use sufficient force to open eyelids. Have the contaminated individual "roll" eyes. Minimum flushing is for 15 minutes.

INHALATION: If vapors, mists, or sprays of this product are inhaled, remove the contaminated individual to fresh air. If necessary, use artificial respiration to support vital functions. Remove or cover gross contamination to avoid exposure to rescuers. The contaminated individual should seek immediate medical attention.

4. FIRST-AID MEASURES (Continued)

INGESTION: If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, do not induce vomiting. Have victim rinse mouth with water or drink several cupfuls of water, if conscious. Never induce vomiting or give a diluent (e.g., water) to someone who is unconscious, having convulsions, or unable to swallow. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Preexisting respiratory problems, dermatitis, other skin disorders, and central nervous disorders may be aggravated by exposure to this product.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and eliminate overexposure. Provide oxygen, if necessary. Pulmonary function tests, chest X-rays, and nervous system evaluations may prove useful.

5. FIRE-FIGHTING MEASURES

FLASH POINT: 65.5-73.8°C (150-165°F)

AUTOIGNITION TEMPERATURE: >600 F° >315 C°

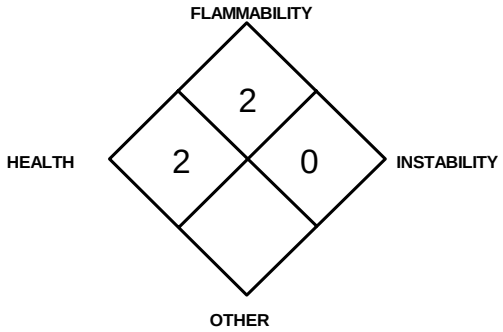
FLAMMABLE LIMITS (in air by volume, %):

- Lower (LEL): (%) 0.7 vol % (estimated)
- Upper (UEL): (%) 6 vol % (estimated)

FIRE EXTINGUISHING MATERIALS:

Water Spray: YES	Carbon Dioxide: YES
Foam: YES	Dry Chemical: YES
Halon: YES	Other: Any "ABC" Class.

NFPA RATING



See Section 16 for Definition of Ratings

UNUSUAL FIRE AND EXPLOSION HAZARDS: This product is Class IIIA combustible liquid, which can ignite if heated at or above its flash point of 65.5-73.8°C (150-165°F). If involved in a fire, this product will produce irritating and toxic materials such as various carbon oxides, aldehydes and hydrocarbons. This product can float on water and may travel to distant locations and spread fire. Containers may rupture violently when exposed to fire or excessive heat for sufficient time.

Explosion Sensitivity to Mechanical Impact: Not sensitive.

Explosion Sensitivity to Static Discharge: In general, materials similar to this product have low electrical conductivities and therefore the liquid can accumulate static charge by flow, agitation or pouring. The warmed vapour can be ignited by an electrostatic discharge of sufficient energy.

SPECIAL FIRE-FIGHTING PROCEDURES: Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Chemical resistant clothing may be necessary. Move containers from fire area if it can be done without risk to personnel. Water spray can be used to cool fire-exposed containers. Avoid getting water into containers because of the danger of boiling over. Stop leak before attempting to stop the fire. If the leak cannot be stopped, and if there is no risk to the surrounding area, let the fire burn itself out. Water fog or spray can also be used by trained firefighters to disperse this product's vapors and to protect personnel. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas. Rinse contaminated equipment thoroughly with soapy water before returning such equipment to service.

6. ACCIDENTAL RELEASE MEASURES

RELEASE RESPONSE: In case of a release, clear the affected area and protect people. Spills will be slippery. Eliminate all sources of ignition before cleanup begins. Use non-sparking tools. Appropriately trained personnel in proper personal protective equipment, using pre-planned procedures should respond to uncontrolled releases. The proper personal protective equipment for incidental releases (e.g., 32-ounce container) should be rubber gloves and goggles. In the event that cleanup will generate excessive splashes, a face-shield, boots, and chemical resistant body protection should also be worn. In the event of a non-incidental release (e.g., several 1-gallon containers released in a poorly ventilated area), minimum Personal Protective Equipment should be Level B: triple-gloves (rubber gloves and nitrile gloves over latex gloves), chemical resistant suit and boots, hard hat, and Self-Contained Breathing Apparatus. A fire-retardant suit must be worn over the chemical resistant suit. Short-term colorimetric detector tubes for the determination of hydrocarbons and petroleum hydrocarbons are commercially available. Monitor area for combustible vapor levels. Monitoring must indicate less than 10% LEL (refer to Section 5, Fire-fighting Measures) before emergency response personnel are permitted in the area. Monitoring must indicate that oxygen levels are above 19.5% before anyone is permitted in the area without Self-Contained Breathing Apparatus. Absorb spilled liquid with activated carbon, polypads, or other suitable absorbent materials. Decontaminate the area thoroughly. Place all spill residue in an appropriate container and seal. Dispose of in accordance with applicable U.S. Federal, State, or local procedures, or appropriate standards of Canada or EU Member States (see Section 13, Disposal Considerations).

PART III *How can I prevent hazardous situations from occurring?*

7. HANDLING and STORAGE

WORK PRACTICES AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing vapors, mists, or sprays of this product. Use in a well-ventilated location. Remove contaminated clothing immediately.

STORAGE AND HANDLING PRACTICES: All employees who handle this material should be trained to handle it safely. Keep away from heat, sparks, and other sources of ignition. Keep container tightly closed when not in use. Open containers slowly on a stable surface. Use non-sparking tools. Bond and ground containers during transfers of material. If this product is transferred into another container, only use portable containers and dispensing equipment (faucet, pump, drip can) approved for flammable liquids. Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers or in a diked area, as appropriate. Store away from incompatible materials (see Section 10, Stability and Reactivity). Containers should be separated from oxidizing materials by a minimum distance of 20 ft. or by a barrier of non-combustible material at least 5 ft. high having a fire-resistance rating of at least 0.5 hours. Storage areas should be made of fire resistant materials. Post warning and "NO SMOKING" signs in storage and use areas, as appropriate. Have appropriate extinguishing equipment in the storage area (e.g., sprinkler system, portable fire extinguishers). Inspect all incoming containers before storage to ensure containers are properly labeled and not damaged. Refer to NFPA 30, *Flammable and Combustible Liquids Code*, for additional information on storage. Empty containers may contain residual amounts of this product; therefore, empty containers should be handled with care. Never perform any welding, cutting, soldering, drilling, or other hot work on an empty container or piping until all liquid, vapors, and residue have been cleared.

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT: Follow practices indicated in Section 6 (Accidental Release Measures). Make certain that application equipment is locked and tagged-out safely, if necessary. Collect all rinsates and dispose of according to applicable U.S. Federal, State, or local procedures and appropriate Canadian standards, or those of EU Member States.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided below, if applicable. Use a non-sparking, grounded, explosion-proof ventilation system separate from other exhaust ventilation systems. Exhaust directly to the outside, taking necessary precautions for environmental protection. Ensure eyewash/safety shower stations are available near areas where this product is used.

EXPOSURE LIMITS/GUIDELINES:

CHEMICAL NAME	CAS #	EXPOSURE LIMITS IN AIR									
		ACGIH-TLVs		OSHA-PELs		NIOSH-RELs		NIOSH	AIHA WEELs		OTHER
		TWA mg/m^3	STEL mg/m^3	TWA mg/m^3	STEL mg/m^3	TWA mg/m^3	STEL mg/m^3	IDLH mg/m^3	TWA mg/m^3	STEL mg/m^3	mg/m^3
Solvent Naphtha (Petroleum), Heavy Aliphatic (exposure limits are for kerosene)	64742-96-7	200 (skin) as total hydrocarbon (P)	NE	NE	NE	100	NE	NE	NE	NE	Carcinogen: TLV-A3
Proprietary Organic Compounds Mixture		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE

NE = Not Established. P = Avoid prolonged and repeated skin contact to diesel fuels which can lead to dermal irritation and may be associated with an increased risk of skin cancer. See Section 16 for Definitions of Terms Used.

EYE PROTECTION: Splash goggles or safety glasses. Face-shields should be worn if operations will generate splashes or sprays. If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian Standards, or the European Standard EN166.

RESPIRATORY PROTECTION: Maintain airborne contaminant concentrations below exposure limits listed above, if applicable. If respiratory protection is needed, use only protection authorized in the U.S. Federal OSHA Standard (29 CFR 1910.134), applicable U.S. State regulations, the Canadian CSA Standard Z94.4-93, the European Standard EN149, or Standards of EU member states. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under OSHAs Respiratory Protection Standard (1910.134-1998). The following are NIOSH respiratory protective equipment for Kerosenes.

KEROSENE

CONCENTRATION	RESPIRATORY PROTECTION
Up to 1000 mg/m^3:	Any chemical cartridge respirator with organic vapor cartridge(s), or any Supplied-Air Respirator (SAR), or any SAR operated in a continuous-flow mode, or any Powered, Air-Purifying Respirator (PAPR) with organic vapor cartridge(s).

8. EXPOSURE CONTROLS - PERSONAL PROTECTION (Continued)

RESPIRATORY PROTECTION (continued):

KEROSENE (continued)

CONCENTRATION	RESPIRATORY PROTECTION
Up to 5000 mg/m^3:	Any Chemical Cartridge Respirator with a full facepiece and organic vapor cartridge(s), or any Air-Purifying, Full-Facepiece Respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister, or any PAPR with a tight-fitting facepiece and organic vapor cartridge(s), or any Self-Contained Breathing Apparatus with a full facepiece, or any SAR.
Emergency or Planned	Entry into Unknown Concentrations or IDLH Conditions: Any SCBA that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode, or any SAR that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary SCBA operated in pressure-demand or other positive-pressure mode.
Escape:	Any Air-Purifying, Full-Facepiece Respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister, or any appropriate escape-type, SCBA.

HAND PROTECTION: Wear Nitrile rubber, Polyethylene, Viton ™ gloves (resistance to breakthrough longer than 8 hours when tested against a similar petroleum substance) for routine industrial use. Natural rubber and butyl rubber gloves are not recommended. Resistance of specific materials can vary from product to product. Evaluate resistance under conditions of use and maintain clothing carefully. Use triple gloves for spill response, as stated in Section 6 (Accidental Release Measures) of this MSDS. If necessary, refer to U.S. OSHA 29 CFR 1910.138, appropriate Standards of Canada, or appropriate Standards of the European Union.

BODY PROTECTION: If operations will generate splashes or sprays, use body protection appropriate for task (e.g., coveralls or apron). If necessary, refer to appropriate Standards of Canada or the European Union. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

9. PHYSICAL and CHEMICAL PROPERTIES

SPECIFIC VAPOR DENSITY (air = 1): > 5.0

SPECIFIC GRAVITY @ 60°F (water = 1): 0.804-0.815

SOLUBILITY IN WATER: Less than 0.01

VAPOR PRESSURE, mm Hg @ 20°C (68°F): 0.010

ODOR THRESHOLD: Not established.

LIQUID DENSITY: 6.7 lb/gal @ 60°F/0.804 lb/gal @ 16°C

EVAPORATION RATE (n-BuAc = 1): < 10

MELTING/FREEZING POINT: -42.7°C (-45.0°F)

BOILING POINT @ 760 mmHg: IBP >400 (D86) F°
IBP >204 (D86) C°

pH: Not applicable.

% VOLATILES: 100%

BULK DENSITY: 900 lb/ft^3

COEFFICIENT OF OIL/WATER DISTRIBUTION (PARTITION COEFFICIENT): Not established.

APPEARANCE, ODOR AND COLOR: This product is a clear, colorless liquid with a mild, paraffin-like odor.

HOW TO DETECT THIS SUBSTANCE (warning properties): The odor may act as a distinguishing characteristic of this product.

10. STABILITY and REACTIVITY

STABILITY: Normally stable.

DECOMPOSITION PRODUCTS: Thermal decomposition of this product can produce various hydrocarbons, carbon oxides and aldehydes.

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: This product is not compatible with strong oxidizers.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Avoid exposure to or contact with extreme temperatures and incompatible chemicals.

PART IV *Is there any other useful information about this material?*

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: Currently, there are no toxicological data available for components

SUSPECTED CANCER AGENT: Petroleum Distillates, Solvent, Aliphatic compounds, such as the main component of this product are listed as follows:

ACGIH TLV-A3 [Confirmed Animal Carcinogen with Unknown Relevance to Humans: The agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) that may not be relevant to worker exposure. Available epidemiologic studies do not conform an increased risk of cancer in exposed humans. Available evidence does not suggest that the agent is likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.] **IARC-3** [Unclassifiable as to Carcinogenicity in Humans: This category is used most commonly for agents, mixtures, and exposure circumstances for which the evidence of carcinogenicity is inadequate in humans and inadequate or limited in experimental animals. Exceptionally, agents (mixtures) for which the evidence of carcinogenicity is inadequate in humans but sufficient in experimental animals may be placed in this category when there is strong evidence that the mechanism of carcinogenicity in experimental does not operate in humans. Agents, mixtures, and exposure circumstances that do not fall into any other group are also placed in this category.]

The remaining component of this product is not found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, and CAL/OSHA and therefore is neither considered to be nor suspected to be a cancer-causing agent by these agencies.

11. TOXICOLOGICAL INFORMATION (Continued)

IRRITANCY OF PRODUCT: This product can be mildly irritating to eyes, skin, and other contaminated tissue.

SENSITIZATION TO THE PRODUCT: No component of this product is known to be a human skin or respiratory sensitizer.

REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of this product and its components on the human reproductive system.

Mutagenicity: The components of this product are not reported to cause mutagenic effects in humans.
Embryotoxcity: The components of this product are not reported to cause embryotoxic effects in humans.
Teratogenicity: The components of this product are not reported to cause teratogenic effects in humans.
Reproductive Toxicity: The components of this product are not reported to cause adverse reproductive effects in humans.

A mutagen is a chemical that causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An embryotoxin is a chemical that causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A teratogen is a chemical that causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance that interferes in any way with the reproductive process.

BIOLOGICAL EXPOSURE INDICES: Currently, there are no Biological Exposure Indices (BEIs) determined for the components of this product.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

ENVIRONMENTAL STABILITY: The components of this product are relatively stable under ambient, environmental conditions.

EFFECT OF MATERIAL ON PLANTS or ANIMALS: This product may be harmful or fatal to contaminated plant and animal life (especially if large quantities are released).

EFFECT OF CHEMICAL ON AQUATIC LIFE: This product may be harmful or fatal to contaminated aquatic plant and animal life. This material floats on water, and can potentially form slicks that are capable of creating oxygen-deprived waterways and severely contaminate coastal and shore life.

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations or with regulations of Canada or EU Member States. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

EPA WASTE NUMBER: Wastes of this product should be tested to see if they are wastes as defined under EPA criteria for D001 listed wastes (Waste Characteristic- Ignitabity).

14. TRANSPORTATION INFORMATION

Call for information

15. REGULATORY INFORMATION

ADDITIONAL U.S. REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: The components of this product are not subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for any component of this product. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lbs. (4,540 kg) therefore applies, per 40 CFR 370.20.

U.S. CERCLA REPORTABLE QUANTITY (RQ): Not applicable.

U.S. TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory.

OTHER U.S. FEDERAL REGULATIONS: OSHA Standard for Flammable and Combustible Liquids (29 CFR 1910.106). Depending on specific operations involving the use of this product, the regulations of the Process Safety Management of Highly Hazardous Chemicals may be applicable (29 CFR 1910.119). Under this regulation, the components of this product are/are not listed in Appendix A (provided Threshold Quantities for Listed Substances); however, any process that involves a flammable liquid on-site, in one location, in quantities of 10,000 lb. (4,553 kg) or greater is covered under this regulation unless it is used as a fuel. Vegetable Oils, such as the Linseed Oil components of this product, are considered OSHA Table Z-1-A air contaminants.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): No component of this product is on the California Proposition 65 lists.

LABELING (Precautionary Statements) ANSI LABELING (Z129.1): **WARNING!** COMBUSTIBLE LIQUID AND VAPOR. MAY CAUSE ALLERGIC SKIN REACTION. HARMFUL IF INHALED. ASPIRATION HAZARD-INGESTION CAN CAUSE LIFE-THREATENING LUNG DAMAGE. Keep away from heat, sparks, and flame. Avoid breathing mists or sprays. Avoid prolonged or repeated contact with skin. Use only with adequate ventilation. Keep container closed. Wash thoroughly after handling. Wear gloves and goggles. **FIRST-AID:** In case of contact, immediately flush skin or eyes for at least 15 minutes with large amounts of water. If inhaled, move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If ingested, do not induce vomiting. Get medical attention immediately. **IN CASE OF FIRE:** Use foam, dry chemical, or carbon dioxide. Liquid will float and may re-ignite on the surface of water. **IN CASE OF SPILL:** Absorb spill with inert material and place in suitable container. Refer to Material Safety Data Sheet for additional information on this product.

ADDITIONAL CANADIAN REGULATIONS:

CANADIAN DSL/NDSL INVENTORY STATUS: The components of this product are listed on the DSL Inventory.

OTHER CANADIAN REGULATIONS: Not applicable.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS: The components of this product are not on the CEPA Priority Substances Lists.

CANADIAN WHMIS CLASSIFICATION and SYMBOLS: **Class B3:** Combustible Liquid
Class D2B: Materials Causing Other Toxic Effects/Toxic Material (irritation).

EUROPEAN UNION INFORMATION FOR PRODUCT:

EU LABELING AND CLASSIFICATION: This product meets the following definitions, per the European Union Council Directives.

EU CLASSIFICATION: [Xn] Harmful.

EU RISK PHRASES: [R: 65]: Harmful; may cause lung damage if swallowed.

EU SAFETY PHRASES: [S: 2-]: Keep out of the reach of children. *(This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only).* [S: 23]: Do not breathe fumes, vapors or spray. [S: 62]: If swallowed, do not induce vomiting. Seek medical advice immediately and show this container and label.

EU SAFETY PHRASES: [S(2–)*]: Keep out of reach of children. **This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only.* [S: 24]: Avoid contact with the skin. [S: 62]: Do not breathe fumes, vapour or spray (appropriate wording to be specified by the manufacturer).

15. REGULATORY INFORMATION (Continued)

EUROPEAN UNION INFORMATION FOR PRODUCT:

EU LABELING AND CLASSIFICATION (continued):

EUROPEAN UNION ANNEX II HAZARD SYMBOL:

EUROPEAN UNION INFORMATION FOR CONSTITUENTS: The following information is available for primary constituents in the components of this product.

Solvent Naphtha (Petroleum), Heavy Aliphatic:

EU EINECS/ELINCS NUMBER: 265-200-4

EU CLASSIFICATION: Harmful. [Xn]

EU RISK PHRASES: [R: 65]: Harmful; may cause lung damage if swallowed.

EU SAFETY PHRASES: [S: 2-]: Keep out of the reach of children. *(This safety phrase can be omitted from the label when the substance or preparation is sold for industrial use only).* [S: 23]: Do not breathe fumes, vapors or spray. [S: 62]: If swallowed, do not induce vomiting. Seek medical advice immediately and show this container or label.

16. OTHER INFORMATION

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The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Star brite assumes no responsibility for injury to the vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, Star brite assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on an MSDS. Some of these, which are commonly used, include the following:

CAS #: This is the Chemical Abstract Service Number that uniquely identifies each constituent.

EXPOSURE LIMITS IN AIR:

CEILING LEVEL: The concentration that shall not be exceeded during any part of the working exposure.

LOQ: Limit of Quantitation.

MAK: Federal Republic of Germany Maximum Concentration Values in the workplace.

NE: Not Established. When no exposure guidelines are established, an entry of NE is made for reference.

NIC: Notice of Intended Change.

NIOSH CEILING: The exposure that shall not be exceeded during any part of the workday. If instantaneous monitoring is not feasible, the ceiling shall be assumed as a 15-minute TWA exposure (unless otherwise specified) that shall not be exceeded at any time during a workday.

NIOSH RELs: NIOSH's Recommended Exposure Limits.

PEL-Permissible Exposure Limit: OSHA's Permissible Exposure Limits. This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (Federal Register: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL," is placed next to the PEL that was vacated by Court Order.

SKIN: Used when a there is a danger of cutaneous absorption.

STEL-Short Term Exposure Limit: Short Term Exposure Limit, usually a 15-minute time-weighted average (TWA) exposure that should not be exceeded at any time during a workday, even if the 8-hr TWA is within the TLV-TWA, PEL-TWA or REL-TWA.

TLV-Threshold Limit Value: An airborne concentration of a substance that represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour.

EXPOSURE LIMITS IN AIR (continued):

TWA-Time Weighted Average: Time Weighted Average exposure concentration for a conventional 8-hr (TLV, PEL) or up to a 10-hr (REL) workday and a 40-hr workweek.

IDLH-Immediately Dangerous to Life and Health: This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury.

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS: This rating system was developed by the National Paint and Coating Association and has been adopted by industry to identify the degree of chemical hazards.

HEALTH HAZARD:

0 (Minimal Hazard: No significant health risk, irritation of skin or eyes not anticipated. *Skin Irritation*: Essentially non-irritating. PII or Draize = "0". *Eye Irritation*: Essentially non-irritating, or minimal effects which clear in < 24 hours [e.g. mechanical irritation]. Draize = "0". *Oral Toxicity LD_{50} Rat*: < 5000 mg/kg. *Dermal Toxicity LD_{50}Rat or Rabbit*: < 2000 mg/kg. *Inhalation Toxicity 4-hrs LC_{50} Rat*: < 20 mg/L.); **1** (Slight Hazard: Minor reversible Injury may occur; slightly or mildly irritating. *Skin Irritation*: Slightly or mildly irritating. *Eye Irritation*: Slightly or mildly irritating. *Oral Toxicity LD_{50} Rat*: > 500-5000 mg/kg. *Dermal Toxicity LD_{50}Rat or Rabbit*: > 1000-2000 mg/kg. *Inhalation Toxicity LC_{50}* 4-hrs *Rat*: > 2-20 mg/L); **2** (Moderate Hazard: Temporary or transitory injury may occur. *Skin Irritation*: Moderately irritating; primary irritant; sensitizer. PII or Draize > 0, < 5. *Eye Irritation*: Moderately to severely irritating and/or corrosive; reversible corneal opacity; corneal involvement or irritation clearing in 8-21 days. Draize > 0, $\leq$ 25. *Oral Toxicity LD_{50} Rat*: > 50-500 mg/kg. *Dermal Toxicity LD_{50}Rat or Rabbit*: > 200-1000 mg/kg. *Inhalation Toxicity LC_{50} 4-hrs Rat*: > 0.5-2 mg/L.);

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS (continued):

HEALTH HAZARD (continued):

3 (Serious Hazard: Major injury likely unless prompt action is taken and medical treatment is given; high level of toxicity; corrosive. *Skin Irritation*: Severely irritating and/or corrosive; may destroy dermal tissue, cause skin burns, dermal necrosis. PII or Draize > 5-8 with destruction of tissue. *Eye Irritation*: Corrosive, irreversible destruction of ocular tissue; corneal involvement or irritation persisting for more than 21 days. Draize > 80 with effects irreversible in 21 days. *Oral Toxicity* LD_{50} *Rat*: > 1-50 mg/kg. *Dermal Toxicity* LD_{50}*Rat or Rabbit*: > 20-200 mg/kg. *Inhalation Toxicity* LC_{50} *4-hrs Rat*: > 0.05-0.5 mg/L.); **4** (Severe Hazard: Life-threatening; major or permanent damage may result from single or repeated exposure. *Skin Irritation*: Not appropriate. Do not rate as a "4", based on skin irritation alone. *Eye Irritation*: Not appropriate. Do not rate as a "4", based on eye irritation alone. *Oral Toxicity* LD_{50} *Rat*: ≤ 1 mg/kg. *Dermal Toxicity* LD_{50}*Rat or Rabbit*: ≤ 20 mg/kg. *Inhalation Toxicity* LC_{50} *4-hrs Rat*: ≤ 0.05 mg/L).

FLAMMABILITY HAZARD:

0 (Minimal Hazard-Materials that will not burn in air when exposure to a temperature of 815.5°C [1500°F] for a period of 5 minutes.); **1** (Slight Hazard-Materials that must be pre-heated before ignition can occur. Material require considerable pre-heating, under all ambient temperature conditions before ignition and combustion can occur, Including: Materials that will burn in air when exposed to a temperature of 815.5°C (1500°F) for a period of 5 minutes or less; Liquids, solids and semisolids having a flash point at or above 93.3°C [200°F] (e.g. OSHA Class IIIB, or; Most ordinary combustible materials [e.g. wood, paper, etc.]; **2** (Moderate Hazard-Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not, under normal conditions, form hazardous atmospheres in air, but under high ambient temperatures or moderate heating may release vapor in sufficient quantities to produce hazardous atmospheres in air, Including: Liquids having a flash-point at or above 37.8°C [100°F]; Solid materials in the form of course dusts that may burn rapidly but that generally do not form explosive atmospheres; Solid materials in a fibrous or shredded form that may burn rapidly and create flash fire hazards (e.g. cotton, sisal, hemp; Solids and semisolids that readily give off flammable vapors.); **3** (Serious Hazard- Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures, or, unaffected by ambient temperature, are readily ignited under almost all conditions, including: Liquids having a flash point below 22.8°C [73°F] and having a boiling point at or above 38°C [100°F] and below 37.8°C [100°F] [e.g. OSHA Class IB and IC]; Materials that on account of their physical form or environmental conditions can form explosive mixtures with air and are readily dispersed in air [e.g., dusts of combustible solids, mists or droplets of flammable liquids]; Materials that burn extremely rapidly, usually by reason of self-contained oxygen [e.g. dry nitrocellulose and many organic peroxides]); **4** (Severe Hazard-Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air, and which will burn readily, including: Flammable gases; Flammable cryogenic materials; Any liquid or gaseous material that is liquid while under pressure and has a flash point below 22.8°C [73°F] and a boiling point below 37.8°C [100°F] [e.g. OSHA Class IA; Material that ignite spontaneously when exposed to air at a temperature of 54.4°C [130°F] or below [e.g. pyrophoric]).

PHYSICAL HAZARD:

0 (*Water Reactivity*: Materials that do not react with water. *Organic Peroxides*: Materials that are normally stable, even under fire conditions and will not react with water. *Explosives*: Substances that are Non-Explosive. Unstable *Compressed Gases*: No Rating. *Pyrophorics*: No Rating. *Oxidizers*: No "0" rating allowed. *Unstable Reactives*: Substances that will not polymerize, decompose, condense or self-react.); **1** (*Water Reactivity*: Materials that change or decompose upon exposure to moisture. *Organic Peroxides*: Materials that are normally stable, but can become unstable at high temperatures and pressures. These materials may react with water, but will not release energy. *Explosives*: Division 1.5 & 1.6 substances that are very insensitive explosives or that do not have a mass explosion hazard.

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS (continued):

PHYSICAL HAZARD (continued):

1 (continued): *Compressed Gases*: Pressure below OSHA definition. *Pyrophorics*: No Rating. *Oxidizers*: Packaging Group III; Solids: any material that in either concentration tested, exhibits a mean burning time less than or equal to the mean burning time of a 3:7 potassium bromate/cellulose mixture and the criteria for Packing Group I and II are not met. Liquids: any material that exhibits a mean pressure rise time less than or equal to the pressure rise time of a 1:1 nitric acid (65%)/cellulose mixture and the criteria for Packing Group I and II are not met. *Unstable Reactives*: Substances that may decompose, condense or self-react, but only under conditions of high temperature and/or pressure and have little or no potential to cause significant heat generation or explosive hazard. Substances that readily undergo hazardous polymerization in the absence of inhibitors.); **2** (*Water Reactivity*: Materials that may react violently with water. *Organic Peroxides*: Materials that, in themselves, are normally unstable and will readily undergo violent chemical change, but will not detonate. These materials may also react violently with water. *Explosives*: Division 1.4 – Explosive substances where the explosive effect are largely confined to the package and no projection of fragments of appreciable size or range are expected. An external fire must not cause virtually instantaneous explosion of almost the entire contents of the package. *Compressed Gases*: Pressurized and meet OSHA definition but < 514.7 psi absolute at 21.1°C (70°F) [500 psig]. *Pyrophorics*: No Rating. *Oxidizers*: Packing Group II Solids: any material that, either in concentration tested, exhibits a mean burning time of less than or equal to the mean burning time of a 2:3 potassium bromate/cellulose mixture and the criteria for Packing Group I are not met. Liquids: any material that exhibits a mean pressure rise time less than or equal to the pressure rise of a 1:1 aqueous sodium chlorate solution (40%)/cellulose mixture and the criteria for Packing Group I are not met. *Unstable Reactives*: Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure, but have a low potential for significant heat generation or explosion. Substances that readily form peroxides upon exposure to air or oxygen at room temperature); **3** (*Water Reactivity*: Materials that may form explosive reactions with water. *Organic Peroxides*: Materials that are capable of detonation or explosive reaction, but require a strong initiating source, or must be heated under confinement before initiation; or materials that react explosively with water. *Explosives*: Division 1.2 – Explosive substances that have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but do not have a mass explosion hazard. *Compressed Gases*: Pressure ≥ 514.7 psi absolute at 21.1°C (70°F) [500 psig]. *Pyrophorics*: No Rating. *Oxidizers*: Packing Group I Solids: any material that, in either concentration tested, exhibits a mean burning time less than the mean burning time of a 3.:2 potassium bromate/cellulose mixture. Liquids: Any material that spontaneously ignites when mixed with cellulose in a 1:1 ratio, or which exhibits a mean pressure rise time less than the pressure rise time of a 1:1 perchloric acid (50%)/cellulose mixture. *Unstable Reactives*: Substances that may polymerize, decompose, condense or self-react at ambient temperature and/or pressure and have a moderate potential to cause significant heat generation or explosion.); **4** (*Water Reactivity*: Materials that react explosively with water without requiring heat or confinement. *Organic Peroxides*: Materials that are readily capable of detonation or explosive decomposition at normal temperature and pressures. *Explosives*: Division 1.1 & 1.2-explosive substances that have a mass explosion hazard or have a projection hazard. A mass explosion is one that affects almost the entire load instantaneously. *Compressed Gases*: No Rating. *Pyrophorics*: Add to the definition of Flammability "4". *Oxidizers*: No "4" rating. *Unstable Reactives*: Substances that may polymerize, decompose, condense or self-react at ambient temperature and/or pressure and have a high potential to cause significant heat generation or explosion.).

DEFINITIONS OF TERMS (Continued)

NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS:

HEALTH HAZARD: **0** (material that on exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials); **1** (materials that on exposure under fire conditions could cause irritation or minor residual injury); **2** (materials that on intense or continued exposure under fire conditions could cause temporary incapacitation or possible residual injury); **3** (materials that can on short exposure could cause serious temporary or residual injury); **4** (materials that under very short exposure could cause death or major residual injury).

FLAMMABILITY HAZARD: **0** Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. **1** Materials that must be preheated before ignition can occur. Materials in this degree require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur **2** Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not under normal conditions form hazardous atmospheres with air, but under high ambient temperatures or under moderate heating could release vapor in sufficient quantities to produce hazardous atmospheres with air. **3** Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures or, though unaffected by ambient temperatures, are readily ignited under almost all conditions. **4** Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air and will burn readily.

INSTABILITY HAZARD: **0** Materials that in themselves are normally stable, even under fire conditions. **1** Materials that in themselves are normally stable, but that can become unstable at elevated temperatures and pressures. **2** Materials that readily undergo violent chemical change at elevated temperatures and pressures. **3** Materials that in themselves are capable of detonation or explosive decomposition or explosive reaction, but that require a strong initiating source or that must be heated under confinement before initiation. **4** Materials that in themselves are readily capable of detonation or explosive decomposition or explosive reaction at normal temperatures and pressures.

FLAMMABILITY LIMITS IN AIR: Much of the information related to fire and explosion is derived from the **N**ational **F**ire **P**rotection **A**ssociation (**NFPA**). Flash Point - Minimum temperature at which a liquid gives off sufficient vapors to form an ignitable mixture with air. Autoignition Temperature: The minimum temperature required to initiate combustion in air with no other source of ignition. LEL - the lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source. UEL - the highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.

TOXICOLOGICAL INFORMATION:

Human and Animal Toxicology: Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. Definitions of some terms used in this section are: **LD_{50}** - Lethal Dose (solids & liquids) which kills 50% of the exposed animals; **LC_{50}** - Lethal Concentration (gases) which kills 50% of the exposed animals; **ppm** concentration expressed in parts of material per million parts of air or water; **mg/m^3** concentration expressed in weight of substance per volume of air; **mg/kg** quantity of material, by weight, administered to a test subject, based on their body weight in kg. Other measures of toxicity include **TDLo**, the lowest dose to cause a symptom and **TCLo** the lowest concentration to cause a symptom; **TDo**, **LDLo**, and **LDo**, or **TC**, **TCo**, **LCLo**, and **LCo**, the lowest dose (or concentration) to cause lethal or toxic effects. **Cancer Information:** The sources are: **IARC** - the International Agency for Research on Cancer; **NTP** - the National Toxicology Program, **RTECS** - the Registry of Toxic Effects of Chemical Substances, **OSHA** and **CAL/OSHA**. IARC and NTP rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used. **Other Information: BEI** - ACGIH Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV.

ECOLOGICAL INFORMATION:

EC is the effect concentration in water. **BCF** = Bioconcentration Factor, which is used to determine if a substance will concentrate in lifeforms which consume contaminated plant or animal matter. **TL_m** = median threshold limit; Coefficient of Oil/Water Distribution is represented by **log K_{ow}** or **log K_{oc}** and is used to assess a substance's behavior in the environment.

REGULATORY INFORMATION:

U.S. and CANADA:

ACGIH: American Conference of Governmental Industrial Hygienists, a professional association which establishes exposure limits.

This section explains the impact of various laws and regulations on the material. **EPA** is the U.S. Environmental Protection Agency. **NIOSH** is the National Institute of Occupational Safety and Health, which is the research arm of the U.S. **O**ccupational **S**afety and **H**ealth **A**dministration (**OSHA**). **WHMIS** is the Canadian Workplace Hazardous Materials Information System. **DOT** and **TC** are the U.S. Department of Transportation and the Transport Canada, respectively. Superfund Amendments and Reauthorization Act **(SARA)**; the Canadian Domestic/Non-Domestic Substances List **(DSL/NDSL)**; the U.S. Toxic Substance Control Act **(TSCA)**; Marine Pollutant status according to the **DOT**; the Comprehensive Environmental Response, Compensation, and Liability Act **(CERCLA or Superfund)**; and various state regulations. This section also includes information on the precautionary warnings which appear on the material's package label. **OSHA** - U.S. Occupational Safety and Health Administration.

EUROPEAN and INTERNATIONAL:

The DFG: This is the Federal Republic of Germany's Occupation Health Agency, similar to the U.S. OSHA. **EU** is the European Union (formerly known as the **EEC,** European Economic Community). **EINECS:** This is the European Inventory of Now-Existing Chemical Substances. The **ARD** is the European Agreement Concerning the International Carriage of Dangerous Goods by Road and the **RID** are the International Regulations Concerning the Carriage of Dangerous Goods by Rail. **AICS** is the Australian Inventory of Chemical Substances. **MITI** is the Japanese Minister of International Trade and Industry

MATERIAL SAFETY DATA SHEET

ScholAR Chemistry™

5100 W. Henrietta Rd.
West Henrietta, NY 14586
TEL: (866) 260-0501

MSDS No. 9468207 9468505 9468603 9468707
Effective Date: December 6, 2002

SECTION I NAME

Product	Starch, 1% Solution
Chemical Synonyms	N/A
Formula	Mixture.
CAS No.	Mixture.

24 HOUR EMERGENCY ASSISTANCE

416-984-3000

NFPA

Health	0
Flammability	0
Reactivity	0

HAZARD RATING **WHMIS**

LEAST	SLIGHT	MODERATE	HIGH	EXTREME
0	1	2	3	4

SECTION II DANGEROUS INGREDIENTS

Name	%	TLV Units
Soluble starch: CAS # 9005-84-9	1%	N/A
Sodium benzoate: CAS # 532-32-1	0.1%	N/A
Water: CAS # 7732-18-5	98.9%	N/A
CAUTION!		

SECTION III PHYSICAL DATA

Melting Point (°C)	Freezes @ ~ 0 °C	Specific Gravity (H_2O = 1)	~ 1.0
Boiling Point (°C)	~ 100°C	Percent Volatile by Volume (%)	98.9%
Vapor Pressure (mm Hg)	14 (water)	Evaporation Rate (Water =1)	< 1
Vapor Density (Air=1)	0.7 (water)		
Solubility in Water	Complete.		
Appearance & Odor	Clear liquid; no odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash point	Not flammable.	Flammable Limits in Air % by Volume N/A	Lower	Upper

Firefighting Procedures

Use dry chemical, CO_2, alcohol foam, or water spray. In fire conditions, fire-fighters should wear an appropriate mask or a self-containing breathing apparatus.

Flammability and Explosion Hazards

N/A

TDG **Not a TDG controlled material.**

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. For laboratory use only. Not for drug, food or household use. Keep out of reach of children. Printed on recycled paper.

SECTION V REACTIVITY DATA

SS0982

Chemical Stability	Yes	X	If no, under what conditions?
	No		
Incompatible with Other products	Yes		N/A
	No	X	
Hazardous Decomposition Products	N/A		
Reactive under what conditions	Excessive temperature may cause evaporation.		

SECTION VI TOXICOLOGICAL PROPERTIES

Route of Entry	Inhalation. Ingestion.
TLV	There are no TWA established by ACGIH 2001 for this mixture.
Toxicity for animals	Not available.
Chronic effects on humans	There are no known effects from chronic exposure to this product. Target organs: None known.
Acute effects on humans	Contact may cause irritation to the skin and eyes.

SECTION VII PREVENTIVE MEASURES

Waste Disposal	Discharge, treatment, or disposal may be subject to local laws. Consult your local or regional authorities.
Storage	Keep container in a cool, well ventilated place. Keep away from incompatible materials.
Precautions	Avoid contact with skin and eyes. Do not breathe vapors or spray. Use with adequate ventilation. Do not ingest. If ingested, seek immediate medical attention.
Spill or leak	Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Wash spill area with soap and water.
Protective Clothing	Splash goggles, lab coat, vapor respirator, gloves.

SECTION VIII FIRST AID MEASURES

Specific first aid measures

Ingestion: Call physician or Poison Control Center immediately. Induce vomiting only if advised by the appropriate medical personnel. Eye contact: Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek medical attention. Skin contact: Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Inhalation: Move victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Allow victim to rest in a well ventilated area. Seek immediate medical attention.

SECTION IX PREPARATION OF THE MSDS

Rev. No.	3	Date	December 6, 2002	Approved	Michael Raszeja

Fiche Signalétique

ScholAR Chemistry™

5100 W. Henrietta Rd.
West Henrietta, NY 14586
TEL: (866) 260-0501

MSDS 9468207 9468505 9468603 9468707
Validé par: 6 décembre, 2002

SECTION I Identification

Produit	Amidon, solution de 1%
Synonymes	Sans objet.
Formule	Mélange.
# CAS	Mélange.

Telephone D'urgence

416-984-3000

NFPA

Santé	0
Flammabilité	0
Reactivité	0

Niveau de risque **WHMIS**

Minime	Légere	Modéré	Serieux	Extréme
0	1	2	3	4

SECTION II Ingrédients Dangereux

Nom	%	TWA
Amidon soluble: CAS # 9005-84-9	1%	Sans objet.
Benzoate de sodium: CAS # 532-32-1	0,1%	Sans objet.
Eau: CAS # 7732-18-5	98,9%	Sans objet.
ATTENTION!		

SECTION III Caractéristiques Physiques

Point de fusion (°C)	Gele à ~ 0 °C	Gravité spécifique (Eau = 1)	~ 1,0
Point d'ebullition (°C)	~ 100°C	Volatilité % par volume	98,9%
Tension de vapeur (mm Hg)	14 (eau)	Taux d'évaporation (Eau =1)	< 1
Densité de la vapeur (Air=1)	0,7 (eau)		
Solubilité	Complet.		
Odeur et apparence	Liquide incolore; sans odeur.		

SECTION IV Risques D'incendie ou D'explosion

Point d'éclair	Ininflammable.	Limites d'inflmmabilité % par volume	Seuil minimal	Seuil maximal
		Sans objet.		

Moyens d'extinction

Utiliser des poudres chimiques sèches, du CO_2, une mousse d'alcool ou de l'eau pulvérisée. En cas de feu, sapeur-pompeir devra porter en masque adéquate ou un respirateur autonome.

Inflammabilité et risques d'explosion

Sans objet.

TMD **Substance non réglementée par le TMD.**

Au meilleur de nos connaissances, l'information contenue dans ce document est exacte. Toutefois, ni le fournisseur ci-haut mentionné ni aucune de ses succursales ne peut assumer quelque responsabilité que ce soit en ce qui à trait à l'exactitude ou à l'état complet de l'information contenue dans ce document. La détermination finale de la convenance de tout matérial ou produit est la responsabilité exclusive de l'utilisateur. Tous les matériaux ou produits peuvent présenter certains risques et devraient être utilisés avec prudence. Bien que certains risques soient décrits dans ce document, nous ne pouvons garantir que ce sont les seuls risques qui existent.

SECTION V Données sur la Réactivité

SS0982

Chimique Stabilité	oui	X	Si non, dans quelles condition?
	non		
Incompatibilité avec d'autres produits	oui		Sans objet.
	non	X	
Produits de decomposition dangereux	Sans objet.		
Conditions de Réactivité	Température excessif peut causer de l'évaporation.		

SECTION VI Propriétés Toxicologiques

Voies d'absorption	Inhalation. Ingestion.
LMP	Il n'y a aucune TLV établie par ACGIH 2001 pour ce mélange.
Toxicité pour les animaux	N'est pas à notre disposition.
Effets chroniques sur les humains	Il n'y a aucun effet connu dû exposition chronique à ce produit. On ne connaît aucun organe de cible.
Effets aigué sur les humains	Le contact peut causer une irritation de la peau et des yeux.

SECTION VII Mesures Préventives

Élimination des résidus	Consulter vos autorités locales ou régionales.
Entreposage	Conserver le récipient dans un endroit frais et bien aéré. Conserver à l'écart des matières incompatibles.
Précautions	Éviter tout contact avec la peau et les yeux. Ne pas inhaler les vapeur ou aérosols. Utilsez la ventilation adéquate. Ne pas ingérer. En cas d'ingestion il faut obtenir immédiatement de l'aide médicale.
Déversement ou fuite	Diluer avec de l'eau et absorber avec un balai ou avec une substance sèche inerte et mettre dans un contenant de récupération approprié. Bien laver la surface où le solide était répandu avec du savon et de l'eau.
Vêtements de protection	Lunettes anti-éclaboussures, blousse de laboratoire (sarrau), respirateur anti-vapeurs, gants.

SECTION VIII Premiers Soins

Premier Soins Particuliers à Administrer

Ingestion: Consulter une médecin ou le centre de poison commande immédiatement. Induisez le vomissement seulement s'informé par le personnel médical approprié. Contact oculaire: Vérifer si la victime porte des verres de contact et dans ce cas lui les enlever. Rincer les yeux immèdiatement à l'eau courante pendant au moins 15 minutes en gardant les paupiéres ouvertes. Obtenir de l'aide médicale. Contact cutane: Laver doucement et entièrement la peau contaminée à l'eau courante avec un savon doux et non-abrasif. Inhalation: Sortir la victime à l'air frais. Si elle ne respire plus il faut lui donner de la respiration artificielle. Si la respiration est difficile, donnez l'oxygène. Assurez-vous que la victime se repose dans un endroit bien aéré. Obtenir immédiatement de l'aide médicale.

SECTION IX Renseignements sur la Préparation de la FS

# Rev.	3	Date	6 decembre, 2002	Vérifié par	Michael Raszeja

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 778.00

Revision Date: March 26, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Starch

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **N/A**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

Product should be treated as a chemical and is not for consumption as it has been stored with other nonfood-grade chemicals.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Starch (Potato or Corn)	9005-84-9	Unspecified	Unspecified	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic Miscellaneous
Keep container tightly closed. Store in a cool, dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes. Wash hands thoroughly after handling.
Exposure guidelines: PEL 15 mg/m^3 (as total dust)(OSHA); TLV 10 mg/m^3 (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White amorphous powder. Odorless.
Soluble: Hot water

Melting point: 256-258 ^oC (decomposes)
Not for human consumption.

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers.
Shelf life: Indefinite, if kept dry.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Nuisance dust, an allergen.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (232-686-4).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 26, 2014

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Safety Data Sheet (SDS)

SDS #: 778.00

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If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

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Revision Date: March 26, 2014

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MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product number	234
Product name	**STA-SHINE STAINLESS STEEL POLISH OIL BASED**
Effective date	13-Nov-2007
Company information	CSI PRODUCTS, INC. ADDISON, IL 60101 United States
Company phone	General Assistance 1-630-543-7600
Emergency telephone US	1-866-836-8855
Emergency telephone outside US	1-952-852-4646
Supersedes date	08-Jun-2007

2. Hazards Identification

Emergency overview	CONTENTS UNDER PRESSURE. Aerosol. Pressurized container may explode when exposed to heat or flame. Prolonged exposure may cause chronic effects.
OSHA regulatory status	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Inhalation	Intentional misuse by concentrating and inhaling the product can be harmful or fatal.
Ingestion	Exposure by ingestion of an aerosol is unlikely. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Target organs	Central nervous system.
Chronic effects	May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage.
Signs and symptoms	Narcosis.

3. Composition / Information on Ingredients

Components	CAS #	Percent
n-Butane	106-97-8	5 - 8
Propane	74-98-6	3 - 5
Non-hazardous and other components below reportable levels		80 - 90

4. First Aid Measures

First aid procedures	
Eye contact	Flush eyes with water as a precaution. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops or persists.
Skin contact	Immediately take off all contaminated clothing. Wash off with soap and water. Get medical attention if irritation develops or persists.
Inhalation	Call a physician if symptoms develop or persist.
Ingestion	Rinse mouth. Do not induce vomiting without medical advice. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. If ingestion of a large amount does occur, seek medical attention.
Notes to physician	Symptoms may be delayed.
General advice	If you feel unwell, seek medical advice (show the label where possible).

5. Fire Fighting Measures

Flammable properties	Containers may explode when heated. Vapor or gas may spread to distant ignition sources and flash back.

Extinguishing media

Suitable extinguishing media Large Fires: Water spray, fog or regular foam.

Small Fires: Dry chemical, CO_2, water spray or regular foam.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Protection of firefighters

Protective equipment and precautions for firefighters In the event of fire and/or explosion do not breathe fumes. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Containers should be cooled with water to prevent vapor pressure build up. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

6. Accidental Release Measures

Personal precautions Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering. Keep unnecessary personnel away.

Methods for containment Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable.

Methods for cleaning up Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean contaminated surface thoroughly.

7. Handling and Storage

Handling Pressurized container: Do not pierce or burn, even after use. Do not handle or store near an open flame, heat or other sources of ignition. Do not use if spray button is missing or defective. Use only with adequate ventilation. Avoid prolonged exposure.

Storage Level 1 Aerosol.

Contents under pressure. Do not puncture, incinerate or crush. The pressure in sealed containers can increase under the influence of heat. Do not handle or store near an open flame, heat or other sources of ignition. Avoid exposure to long periods of sunlight. Store in cool place. Keep the container dry. Keep in an area equipped with sprinklers. Keep out of the reach of children.

8. Exposure Controls / Personal Protection

Exposure limits

ACGIH

Components	CAS #	TWA	STEL	Ceiling
n-Butane	106-97-8	1000 ppm	Not established	Not established
Propane	74-98-6	1000 ppm	Not established	Not established

OSHA

Components	CAS #	TWA	STEL	Ceiling
Propane	74-98-6	1000 ppm	Not established	Not established

Engineering controls Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Personal protective equipment

Eye / face protection Not normally needed.

Skin protection Not normally needed.

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

General hygeine considerations When using do not smoke. Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance Compressed liquefied gas.

Color White.

Odor Aromatic.

Physical state Liquid.

Form	Aerosol.
Flammability (HOC)	8.5285 kJ/g estimated
Flash back	No
Pressure	50 - 60 psig @ 70 F
Solubility	Partially
Flash point	-156 °F (-104.4 °C) estimated
Boiling point	289.4 °F (142.8 °C) estimated
Specific gravity	0.8938 estimated
pH	7 - 8

10. Chemical Stability & Reactivity Information

Chemical stability	Risk of ignition. Stable at normal conditions.
Conditions to avoid	Heat, flames and sparks.
Hazardous decomposition products	May include oxides of nitrogen.

11. Toxicological Information

Acute effects	Acute LD50: 27288 mg/kg estimated, Rat, Oral
Sensitization	Not expected to be hazardous by OSHA criteria.
Chronic effects	Hazardous by OSHA criteria. Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood. Prolonged exposure may cause chronic effects.
Neurological effects	Hazardous by OSHA criteria.
Mutagenicity	Not expected to be hazardous by OSHA criteria.
Reproductive effects	Not expected to be hazardous by OSHA criteria.
Teratogenicity	Not expected to be hazardous by OSHA criteria.
Epidemiology	Not expected to be hazardous by OSHA criteria.
Further information	Symptoms may be delayed.

12. Ecological Information

Ecotoxicity	LC50 44753 mg/L, Fish, 96.00 Hours, Components of this product have been identified as having potential environmental concerns.

13. Disposal Considerations

Waste codes	D001: Waste Flammable material with a flash point <140 F
Disposal instructions	Consult authorities before disposal. Contents under pressure. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose in accordance with all applicable regulations.

14. Transport Information

Department of Transportation (DOT) Requirements

Basic shipping requirements:	
Proper shipping name	Consumer commodity
Hazard class	ORM-D
Subsidiary hazard class	None
Additional information:	
Packaging exceptions	156, 306
Packaging non bulk	156, 306
Packaging bulk	None

IMDG

Basic shipping requirements:

Proper shipping name	AEROSOLS, flammable
Hazard class	2.1
UN number	1950
Additional information:	
Packaging exceptions	LTD QTY
Item	5F
Labels required	2.1
Transport Category	2

IATA

Basic shipping requirements:

Proper shipping name	Aerosols, flammable
Hazard class	2.1
UN number	1950
Additional information:	
Packaging exceptions	LTD QTY

15. Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
CERCLA/SARA Hazardous Substances - Not applicable.

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - Yes
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of New and Existing Chemicals (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations

U.S. - Pennsylvania - RTK (Right to Know) List

n-Butane	106-97-8	Present
Propane	74-98-6	Present

16. Other Information

HMIS® ratings Health: 0
Flammability: 1
Physical hazard: 0

Prepared by Regulatory Compliance

Disclaimer	The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
Issue date	13-Nov-2007

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 781.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Stearic Acid

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

Hazard class: Specific target organ toxicity, single exposure; respiratory tract irritation (Category 3). May cause respiratory irritation (H335). Avoid breathing dust or fumes (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Stearic acid (reagent grade) Laboratory grade is 45-50% stearic acid and 44-49% palmitic acid. Synonym: Octadecanoic acid	57-11-4	$CH_3(CH_2)_{16}COOH$	284.49	>95%

SECTION 4 — FIRST AID MEASURES

Get medical advice or attention (P313).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Wash with plenty of water (P302+P352). **If skin irritation occurs:** Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Class IIIB combustible solid.
Flash Point 196 °C Autoignition temp. 395 °C.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
H-1
F-1
R-0

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Wipe up the spill, place in a sealed bag or container, and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #1. Store with acids, anhydrides and peracids.
Keep container tightly closed (P233). Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White, waxy solid. Fatty acid odor.
Soluble: Many common organic solvents. Insoluble in water.

Boiling point: 183-184 ^{o}C for reagent grade
Melting point: 67 to 69 ^{o}C for reagent grade
Melting point: 55 to 56 ^{o}C for laboratory grade
Specific gravity: 0.839 for reagent grade

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers, bases and reducing agents.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Skin, eye, and respiratory tract irritation.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (200-313-4).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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Steramine Tablets

Why Sanitize? Features Uses Compare Packaging Links MSDS
Complies with OSHA'S Hazard Communication Standard 29CFR 1910 1200

DATE PREPARED 11-14-08

SECTION 1. PRODUCT IDENTIFICATION

PRODUCT NAME: STERAMINE 1-G TABLETS

EPA REG. NO.: 1561-11
This product is registered and regulated by EPA under FIFRA and regulated by FDA under subpart F of The Food Additives Amendment.

PRODUCT USE: Tablets are dissolved in water to provide sanitizing solutions for food contact surface sanitizing in the food service industry.

MANUFACTURER:
EDWARDS-COUNCILOR CO., INC.
1427 BAKER ROAD
VIRGINIA BEACH, VA 23455

EMERGENCY PHONE NO: (800)424-9300
PHONE FOR INFORMATION:(804) 460-2401

SECTION 2. HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENT
CHEMICAL NAME: (COMMON NAME)

	C.A.S. NUMBER	% PRESENT	TLW UNITS
ALKYL (C14 95%, C12 3%, C16 2%) DIMETHYL BENZYL AMMONIUM CHLORIDE DIHYDRATE (QUATERNARY AMMONIUM COMPOUND - MYRISTALKONIUM CHLORIDE)	8001-54-5	50%	NIA

HAZARD RATING 1, HEALTH 1, FIRE REACT 0
RCRA HAZARDOUS WASTE CLASS: NON HAZARDOUS
EPA PRIORITY POLLUTANTS: NONE
DOT HAZARD CLASS: NON HAZARDOUS

SECTION 3. PHYSICAL DATA

PHYSICAL FORM: SOLID (TABLET)
APPEARANCE AND ODOR: WHITE, ODORLESS TABLET
SOLUBILITY IN WATER: SOLUBLE
VOLATILES: NON VOLATILE

BOILING PT.: N/A
SPECIFIC GRAVITY: N/A
FLASH PT. PMCC: > 200° F
MELTING PT: > 125° F

SECTION 4. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT, PMCC: >2000 F
FLAMMABLE LIMITS: UNDETERMINED

EXTINGUISHING MEDIA: WATER SPRAY, CARBON DIOXIDE, DRY CHEMICALS, FOAM
SPECIAL FIRE FIGHTING PROCEDURES: NONE
UNUSUAL FIRE AND EXPLOSION HAZARD: NONE
HAZARDOUS THERMAL DECOMPOSITION PRODUCTS: CARBON MONO/IDIOXIDE

SECTION 5. REACTIVITY DATA
STABILITY: STABLE
INCOMPATABILITIES TO AVOID: STRONG OXIDIZING AGENTS
HAZARDOUS POLYMERIZATION WILL NOT OCCUR
CONDITIONS TO AVOID: CONTAMINATION OF FOOD

SECTION 6. HEALTH HAZARD DATA
THRESHOLD LIMIT VALUE: NOT ESTABLISHED
PRIMARY ROUTES QF EXPOSURE:
EYES: UNLIKELY
ORAL INGESTION: YES
SKIN: UNLIKELY
INHALATION: UNLIKELY

THIS PRODUCT, BEING IN SOLID, TABLET FORM, IS UNLIKELY TO PRESENT A HAZARD IN HANDLING TO THE SKIN OR EYES. HOWEVER IF TABLETS ARE CRUSHED AND DUST IS CREATED, THE DUST MAY BE IRRITATING TO THE EYES AND IRRITATING TO THE SKIN IF CONTACT IS PROLONGED. ORAL INGESTION MAY BE HARMFUL.

EMERGENCY AND FIRST AID PROCEDURES:
EYES AND SKIN: IF TABLET DUST GETS IN EYES OR ON SKIN, FLUSH WITH PLENTY OF WATER. IF IRRITATION PERSISTS, GET MEDICAL ATTENTION.

INGESTION: IF TABLETS ARE SWALLOWED, DRINK PROMPTLY A LARGE QUANTITY OF WATER. AVOID ALCOHOL. GET MEDICAL ATTENTION IMMEDIATELY.

NOTE TO PHYSICIAN: PROBABLE MUCOSAL DAMAGE MAY CONTRAINDICATE THE USE OF GASTRIC LAVAGE. MEASURES AGAINST CIRCULATORY SHOCK, RESPIRATORY DEPRESSION AND CONVULSION MAY BE NEEDED.

INHALATION PROCEDURE: SAME AS FOR INGESTION
TOXICITY: ACUTE ORAL TOXICITY IN MICE IN 24 HOURS:

LD50mg/kg = 760 +/- 146

NOTE: INDIVIDUAL TABLETS WEIGH 1.5 GRAMS EACH.
TABLETS CONTAIN AN INGREDIENT THAT TASTES EXTREMELY BITTER, ESPECIALLY TO CHILDREN, TO HELP REDUCE THE CHANCE OF ACCIDENTAL INGESTION OF ENOUGH TABLETS TO BE HARMFUL.

SANITIZING SOLUTIONS PRODUCED WITH THESE TABLETS AT THE CONCENTRATION LEVEL SPECIFIED BY LABEL DIRECTIONS ARE CONSIDERED TO BE NON HAZARDOUS TO MAN OR THE ENVIRONMENT AND ARE IN COMPLIANCE WITH REGULATIONS OF THE

EPA AND FDA.

THERE ARE NO CHEMICALS CONTAINED IN THIS PRODUCT THAT ARE LISTED AS CARCINOGENS OR POTENTIAL CARCINOGENS UNDER THE NATONAL TOXICOLOGY PROGRAM, I.A.R.C. MONOGRAPHS, OR OSHA.

SECTION 7. SPILL OR LEAK PROCEDURES
THIS PRODUCT, BEING IN SOLID, TABLET FORM, DOES NOT INVOLVE THE HAZARDS OF SPILLS OR LEAKS ASSOCIATED WITH HANDLING LIQUID OR POWDERED TYPE PRODUCTS.

WASTE DISPOSAL METHOD: THIS PRODUCT IS INTENDED FOR USE IN COMMERCIAL AND INSTITUTIONAL DISHWASHING OPERATIONS AND MAY BE DISPOSED OF WITH WASH WATER INTO THE SANITARY SEWAGE SYSTEM. PRODUCT IS BIODEGRADABLE. DO NOT REUSE EMPTY CONTAINER, WRAP CONTAINER AND PUT IN TRASH.

RCRA HAZARDOUS WASTE CLASS: NON.HAZARDOUS

SECTION 8. SPECIAL PROTECTION/HANDLING INFORMATION
RESPIRATORY PROTECTION: NO
PROTECTIVE CLOTHING/GLOVES: NO
VENTILATION: NO
EYE PROTECTION: NO

OTHER HANDLING PRECAUTIONS: KEEP OUT OF REACH OF CHILDREN STORAGE. STORE IN DRY PLACE. KEEP CONTAINER CLOSED WHEN NOT IN USE.

DO NOT CONTAMINATE FOOD BY STORAGE OR DISPOSAL.

SECTION 9. SARA TITLE III
THIS PRODUCT IS NOT SUBJECT TO THE TOXIC CHEMICAL REPORTING REQUIREMENTS OFSECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372.

Why Sanitize? Features Uses Compare Packaging Links MSDS Contact Us

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CA-04028

MSDS #0005

MSDS # 0005
REVISED DATE: 06/16/00
PRODUCT NAME: STERNO® CANNED HEAT™ COOKING FUEL

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION:

ACUTE HEALTH	FIRE	REACTIVITY	HMIS HAZARD RATING:	LEAST- 0	SLIGHT- 1	MODERATE- 2	HIGH - 3	EXTREME- 4
2	3	0						

PRODUCT NAME: STERNO® CANNED HEAT™ COOKING FUEL (STERNO GALLONS)
UPC/SKU #: US Domestic: ST04028 (1 gal)
International: ST04028A (1 gal), ST04028B (1 gal), ST04028C (1 gal)

CAS NUMBER: Not applicable - product is a mixture
GENERAL USE: A gelled ethyl alcohol food warming fuel. Fuel is SDA-3A (ethyl alcohol denatured with methyl alcohol.)

CANDLE CORPORATION OF AMERICA
Institutional Products Group
999 E Touhy, Suite 450
Des Plaines, IL USA 60018

DOMESTIC: For consumer information: Call toll free: (888) 4-LITES-1

EMERGENCY TELEPHONE NUMBER: For emergencies involving spill, leak, fire, exposure or accident, call CHEMTREC: (800) 424-9300, day or night.

THE PITTSBURGH POISON CENTER HAS BEEN PROVIDED SPECIFIC INFORMATION FOR USE IN MEDICAL EMERGENCIES INVOLVING THESE PRODUCTS. IN THE USA, CANADA & MEXICO, CALL TOLL FREE: (888) 313-8954.

INTERNATIONAL: ALL EMERGENCIES, involving spill, leak, fire, exposure or accident, CALL (703) 527-3887. ALL MEDICAL EMERGENCIES, call your local Poison Control Center.

---

2. COMPOSITION/INFORMATION ON INGREDIENTS:

OSHA REGULATED COMPONENTS (present at a concentration > or = 1%):

Component	CAS #	%	PEL	TLV
Ethanol	64-17-5	67		1000 ppm
Methanol	67-56-1	3-4		200 ppm
Acetone	67-64-1	2-4		750 ppm

The following components, present at a concentration > or = 0.1%, are listed as carcinogens or potential carcinogens by either the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC) or OSHA:

Component	CAS #	%	PEL	TLV
None - not applicable				

---

3. HAZARDS IDENTIFICATION:

Flammable solid, gelled ethanol, and it's pink in appearance.
PRECAUTIONARY LABELING: Caution flammable mixture. Keep away from children. Do not use near fire or flame. Contains 3.3% Methyl Alcohol.

EYE CONTACT: Eye irritant upon direct contact.

SKIN CONTACT: May cause skin irritation upon prolonged contact.

INGESTION: possible Alcoholic breathe, exhilaration followed by CNS depression, slurred speech, convulsions and hypoglycemia.

INHALATION: Burn product in a well-ventilated area.

---

4. FIRST AID MEASURES:

EYE CONTACT: Flush eye with large amounts of warm water for 15 minutes. If irritation persists, contact poison center or doctor.

SKIN CONTACT: Remove and isolate contaminated clothing. Flush exposed area with warm water for 15 minutes. If irritation persists, contact poison center or doctor.

INGESTION: Drink sips of warm water or milk. If symptoms persist, contact poison center or doctor.

INHALATION: Seek fresh air and take slow deep breaths. Drink some sips of water. If coughing persists, contact poison center or doctor.

---

5. FIRE FIGHTING MEASURES:

FLASH POINT (METHOD): 54 degrees F or 12.1 degrees C (Tag closed cup)
AUTOIGNITION: @ 745 mm Hg: 845.6 degrees F (452 degrees C)
EXTINGUISHING MEDIA: CO_2, Foam, Dry Chemical

SPECIAL FIRE FIGHTING PROCEDURES: No known toxic combustion products or special fire fighting hazards. Self-contained breathing apparatus and protective clothing should be worn when fighting chemical fires. Do not use high pressure stream of water to extinguish burning material.

UNUSUAL FIRE AND EXPLOSION HAZARD: Closed cans exposed to flame and heat may erupt, scattering fragments.

---

6. ACCIDENTAL RELEASE MEASURES:

SMALL SPILLS: Remove all sources of ignition. Provide adequate ventilation. Absorb on vermiculite, paper or other absorbent. Flush area with water.

---

7. HANDLING AND STORAGE:

STORAGE: Store in a cool dry place (40 - 120 degrees F or 4 - 49 degrees C). Provide adequate ventilation in area of use. Store away from sources of heat or open flame. Keep container closed when not in use.

HANDLING: Avoid contact with skin and eyes. Do not ingest . Only refill into approved cast iron burner cups that are designed for such applications. Do not attempt to refill with tongs etc. from gallon can while product is burning. Keep away from children.

---

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

GENERAL CONTROLS: Avoid contact with skin and eyes. Provide adequate ventilation.

PROTECTIVE CLOTHING: The use of eye protection (goggles) and rubber gloves is recommended.

RESPIRATORS: Not required.

SPECIAL PRECAUTIONS: Keep out of the reach of children.

PRECAUTIONARY LABELING: CAUTION: Flammable mixture. Keep away from children. Do not use near flame or fire.

---

9. PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE AND ODOR: Pink-red gel, alcohol odor
DENSITY: 0.85 g/cm3
SOLUBILITY IN WATER: Slight
pH: N/A
VAPOR PRESSURE: N/A
VAPOR DENSITY: N/A
BOILING POINT: N/A
FREEZE/MELT POINT: N/A

---

10. STABILITY AND REACTIVITY:

GENERAL: This product is stable. Hazardous polymerization will not occur.

INCOMPATIBLE MATERIALS: Heat, open flame, strong oxidizers.

HAZARDOUS DECOMPOSITION: None known.

---

11. TOXICOLOGICAL INFORMATION:

No information is available at this time.

---

12. ECOLOGICAL INFORMATION:

No information is available at this time.

---

13. DISPOSAL CONSIDERATIONS:

NOTE: The purchaser is responsible for proper waste disposal of empty, partial, or full cans. Any disposal practice must be in compliance with local, state, and federal laws and regulations (contact local or state environmental agency for specific rules). Do not dump into sewers, any body of water, or onto the ground.

---

14. TRANSPORTATION:

DOT CLASSIFICATION: STO4028, ST04028C - Consumer Commodity ORM-D Exception

INTERNATIONAL: ST04028A (1 gal), ST04028B (1 gal) - Flammable Solid, Organic, N.O.S. , (Contains Ethanol), 4.1, UN 1325, PG III, 4-1 Gal Cans, 32#/Case

---

15. REGULATORY INFORMATION:

OSHA: This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1900.1200).

RCRA (40 CFR 261, Subpart D): The hazardous waste number for methanol is U154 indicating ignitability. This product is considered a hazardous waste based on flammability.

CLEAN WATER ACT: None of the OSHA regulated components in this product are Section 311 listed chemicals.

SARA: Sections 301-304 (Threshold Planning Quantity - TPQ) 40 CFR 355: No TPQ for any OSHA regulated component. Section 313 (Toxic chemical release reporting) 40 CFR 372: The following chemicals must be reported under SARA 313: Not applicable to any OSHA regulated component.

CERCLA: Section 102 (Reportable Quantity - RQ) 40 CFR 302: The RQ for Methyl Alcohol is 5000 lbs. Releases greater than or equal to this amount must be reported to the National Response Center (NRC) immediately:
800-424-8802.

---

16. OTHER INFORMATION:

MSDS REVISION INDICATORS: Revised Sections 1
REVISION DATE: June 16, 2000

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LAST PAGE OF MSDS #0005

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MATERIAL SAFETY DATA SHEET STING-X II AEROSOL

DATE OF ISSUE: 08/27/2001
SUPERCEDES: 05/02/2001

SECTION I - GENERAL INFORMATION

Chemical Name & Synonyms:
N/A

Trade Name & Synonyms:
STING-X II AEROSOL

Chemical Family:
PETROLEUM DISTILLATE

Formula Mixture:
X

Manufacturer's Name:
CERTIFIED LABS, DIV. OF NCH CORP.

Address:
BOX 152170
IRVING, TEXAS 75015

Prepared By: K Dickinson/Chemist
Product Code Number: 5388
Emergency Phone Number: 800-424-9300

SECTION II - HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS:

Chemical Name (Ingredients): PETROLEUM DISTILLATE, HYDROTREATED LIGHT
Percent: 90-100
Hazard: COMB/IRR
TLV: 100 PPM 1
PEL: 500 PPM 2
STEL: N/E
CAS#: 64742-47-8

Chemical Name (Ingredients): CARBON DIOXIDE
Percent: 1-5
Hazard: ASPHYX
TLV: 5000 PPM 1
PEL: 5000 PPM 2
STEL: N/E
CAS#: 124-38-9

Chemical Name (Ingredients): $ DENOTES OIL MIST VALUES
Percent:
Hazard:
TLV:
PEL:
STEL:
CAS#:

SECTION III - PHYSICAL DATA

Boiling Point (f): 424

Specific Gravity (H20=1):	0.80
Vapor Pressure (MM HG):	<0.1
Color:	COLORLESS
Vapor Density (Air=1):	5.9
Odor:	PETROLEUM
PH @ 100%:	N/A
Clarity:	TRANSPARENT
Volatile by Volume:	99
Evaporation Rate (BU A/C=1):	<0.01
H20 Solubility:	NEGLIGIBLE
Viscosity:	NON-VISCOUS

SECTION IV - FIRE AND EXPLOSION HAZARD

Flash Point: 192 F / SETA
Flammable Limits: PETROLEUM DISTILLATES LEL: 0.7 UEL:5

Extinguishing Media:
Foam: X Alcohol Foam: X CO2: X
Dry Chemical: X Water Spray: X Other:

Special Fire Fighting Procedures:
FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. EXTINGUISHING MEDIA SHOULD BE CHOSEN BASED ON THE NATURE OF THE SURROUNDING FIRE. COOL FIRE-EXPOSED CONTAINERS WITH WATER SPRAY TO PREVENT BURSTING.

Unusual Fire and Explosion Hazards:
FLAME EXTENSION IS >36 INCHES, BURNBACK IS 0 INCHES. THE USE OF WATER SPRAY (F0G) WHILE EFFECTIVE, MAY CAUSE FROTHING AND FOAMING. NEVER USE A WATER JET AS THIS WILL JUST SPREAD THE FIRE. PRODUCT MAY PRODUCE A FLOATING FIRE HAZARD AS LIQUID FLOATS ON WATER.

Aerosol Level (NFPA 30B): 3
NFPA 704 Hazard Rating:
(0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)
Health: 1 Flammability: 2 Instability: 0 Special:

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value:
NOT ESTABLISHED FOR MIXTURE. SEE SECTION II.

Effects of Overexposure:
-Acute(Short Term Exposure)
SKIN CONTACT: MAY CAUSE IRRITATION SEEN AS ITCHING AND REDNESS. MAY CAUSE DERMATITIS AND ALLERGIC SKIN REACTION.
EYE CONTACT: CAUSES IRRITATION SEEN AS REDNESS, STINGING AND TEARING. MAY CAUSE CONJUNCTIVITIS.
INHALATION: CAUSES RESPIRATORY IRRITATION SEEN AS COUGHING AND SNEEZING. AT HIGH EXPOSURE LEVELS OF CONCENTRATION, INITIAL SYMPTOMS MAY INCLUDE HEADACHE, DIZZINESS, ANESTHESIA, DROWSINESS, UNCONSCIOUSNESS, CENTRAL NERVOUS SYSTEM DEPRESSION (INTOXICATION), CARDIAC ARRHYTHMIA AND POSSIBLE DEATH MAY OCCUR.
INGESTION: INGESTION AND SUBSEQUENT VOMITING OF THIS PRODUCT CAN LEAD TO ASPIRATION OF THE PRODUCT INTO THE LUNGS WHICH CAN CAUSE DAMAGE AND MAY BE

FATAL. MAY CAUSE GASTROINTESTINAL IRRITATION SEEN AS NAUSEA, VOMITING AND DIARRHEA.

-Chronic (Long Term Exposure)
MAY CAUSE SKIN SENSITIZATION IN SOME INDIVIDUALS.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE ARE PRE-EXISTING HEART, CARDIOVASCULAR DISEASES AND RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA, AND DERMATITIS.
TARGET ORGANS: CENTRAL NERVOUS AND CARDIOVASCULAR SYSTEMS.

Primary Routes of Entry: Inhalation: X Ingestion: Absorption: X

Emergency and First Aid Procedures:
-Inhalation:
REMOVE FROM THE AREA TO FRESH AIR. SEEK MEDICAL ATTENTION IF RESPIRATORY IRRITATION DEVELOPS OR IF BREATHING BECOMES DIFFICULT.

-Eye Contact:
RINSE THE EYES WITH WATER. REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING WITH PLENTY OF WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

-Skin Contact:
WASH AFFECTED AREAS WITH PLENTY OF SOAP AND WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

-Ingestion:
GIVE 3 TO 4 GLASSES OF WATER, BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. GET IMMEDIATE MEDICAL ATTENTION. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON.

-Notes to Physician:
INGESTION AND SUBSEQUENT VOMITING OF THIS PRODUCT CAN LEAD TO ASPIRATION OF THE PRODUCT INTO THE LUNGS WHICH CAN CAUSE DAMAGE AND MAY BE FATAL. DEPENDING ON THE AMOUNT INGESTED AND RETAINED AS WELL AS THE TOXICITY OF THE PRODUCT, GASTRIC LAVAGE SHOULD BE CONSIDERED. KEEP PATIENT'S HEAD BELOW HIPS TO PREVENT PULMONARY ASPIRATION. IF COMATOSE, A CUFFED ENDOTRACHAEL TUBE WILL PREVENT ASPIRATION.

SECTION VI - TOXICITY INFORMATION

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:
IARC: No NTP: No OSHA: No ACGIH: No
OTHER: No

PETROLEUM DISTILLATES, HYDROTREATED LIGHT (BASED ON SIMILAR COMPOUNDS)
ORL-RAT LD50: >5 G/M3 3.
SKN-RBT LD50: >2 G/M3 3.
CARBON DIOXIDE
IHL-RAT TCLO: 10000 PPM/24(S)-30 DAY(S) CONTINUOUS 4.
IHL-HMN LCLO: 9 PPM/5M 4.

SECTION VII - REACTIVITY DATA

Stability: Stable: X Unstable:

Conditions to Avoid: AVOID HEAT, HOT SURFACES, SPARKS AND OPEN FLAMES.
Incompatibility (Materials to Avoid):
STRONG OXIDIZING AGENTS SUCH AS CHLORINE BLEACH AND CONCENTRATED HYDROGEN PEROXIDE.

Hazardous Decomposition Products:
OXIDES OF CARBON.

Hazardous Polymerization:
May Occur: Will Not Occur: X

Conditions to Avoid: N/A.

SECTION VIII - SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled:
DUE TO THE NATURE OF THE AEROSOL PACKAGING, A LARGE SPILL IS UNLIKELY. FOR A SMALL SPILL, VENTILATE THE AREA AND ABSORB WITH AN INERT MATERIAL AND TRANSFER ALL MATERIAL INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL. WEAR APPROPRIATE PROTECTIVE CLOTHING. PREVENT PRODUCT FROM CONTAMINATING SOIL OR FROM ENTERING SEWAGE AND DRAINAGE SYSTEMS AND BODIES OF WATER.

Waste Disposal Method(s):
DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS. TYPICAL DISPOSAL IS TO WRAP THE EMPTY AEROSOL CONTAINER IN SERVERAL LAYERS OF NEWSPAPER AND DISPOSE OF IN THE TRASH. AEROSOL RECYCLING PROGRAMS ARE AVAILABLE IN MANY AREAS. DO NOT PUNCTURE OR INCINERATE THIS CONTAINER.

Neutralizing Agent:
NONE KNOWN.

SECTION IX - SPECIAL PROTECTION INFORMATION

Required Ventilation:
LOCAL VENTILATION IS RECOMMENDED TO CONTROL EXPOSURE FROM OPERATIONS THAT CAN GENERATE MISTS OR VAPORS.

Respiratory Protection:
A NIOSH/MSHA APPROVED RESPIRATOR IN POORLY VENTILATED AREAS AND/OR FOR EXPOSURE ABOVE THE ACGIH TLV OR OSHA PEL OR WHERE MISTING EXISTS.

Glove Protection:
NEOPRENE OR NITRILE RUBBER GLOVES IF REPEATED OR PROLONGED SKIN CONTACT IS LIKELY.

Eye Protection:
SAFETY GLASSES WITH SIDE SHIELDS IF THE METHOD OF USE PRESENTS THE LIKELIHOOD OF EYE CONTACT.

Other Protection:
WEAR PROTECTIVE CLOTHING WHEN HANDLING.

SECTION X - STORAGE AND HANDLING INFORMATION

Storage Temperature: Indoors: X Outdoors: X Heated: Refrigerated:

Minimum Temperature: 32 F Maximum Temperature: 120 F

Precautions to be taken in Handling and Storing:
DO NOT ALLOW PESTICIDE TO CONTAMINATE FOOD, FEED OR NATURAL BODIES OF WATER. USE WITH CAUTION AROUND HEAT, SPARKS, PILOT LIGHTS, STATIC ELECTRICITY AND OPEN FLAME.

Other Precautions:
KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT.

SECTION XI - REGULATORY INFORMATION

Chemical Name	CAS Number	Upper % Limit

Those Ingredients listed above are subject to the reporting requirements of 313 of Title III and of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

CALIFORNIA PROPOSITION 65

WARNING: This product contains the following chemical(s) know to the State of California to cause (1)Cancer or (2)Birth Defects or other reproductive harm. THIS PRODUCT CONTAINSBENZENE (1,2) AND TOLUENE (2) AS TRACE CONTAMINANTS.

SECTION XII - REFERENCES

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 2001.
2. OSHA PEL.
3. SAX'S DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, EIGHTH EDITION, RICHARD J. LEWIS, SR.
4. VENDOR'S MSDS.

ALL COMPONENTS IN THIS PRODUCT CAN BE FOUND IN THE CURRENT TSCA INVENTORY.

---- IRR:IRRITANT, FLAM/FLAMM:FLAMMABLE, COMB:COMBUSTIBLE, CORR:CORROSIVE CARC:CARCINOGENIC, TOX:TOXIC, N/A:NOT APPLICABLE, N/E:NOT ESTABLISHED, COC:CLEVELAND OPEN CUP, PMCC:PENSKY-MARTIN CLOSED CUP, TCC:TAGLIABUE CLOSED CUP, LEL:LOWER EXPLOSION LIMIT, UEL:UPPER EXPLOSION LIMIT, NFPA:NATIONAL FIRE PROTECTION ASSOCIATION, IARC:INTERNATIONAL AGENCY FOR THE RESEARCH ON CANCER, NTP:NATIONAL TOXICOLOGY PROGRAM, OSHA:OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, ACGIH:AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS, TLV:THRESHOLD LIMIT VALUE, PEL:PERMISSIBLE EXPOSURE LIMIT, STEL:SHORT-TERM EXPOSURE LIMIT, MLD:MILD, MOD:MODERATE, SEV:SEVERE, MUT:MUTAGENIC, ASPHYX:ASPHYXIANT, PNOS: PARTICULATES (INSOLUBLE) NOT OTHERWISE SPECIFIED, SDT:STANDARD DRAIZE TEST, ORL: ORAL, HMN: HUMAN, IHL:INHALATION

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

CERTIFIED LABS, DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use,storage or disposal of the product.

MATERIAL SAFETY DATA SHEET

Telephone (704) 987-4555
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Huntersville, NC 28078
www.irwin.com

BLUE CHALK - STANDARD

SECTION 1 – IDENTIFICATION OF PRODUCT

TRADE NAME: BLUE CONSTRUCTION CHALK

CI NAME: N/A

COMPOSITION:

Component	CAS No.	%
Ultramarine Blue – Pigment Blue 29	57455-37-5	10-25
Calcium Carbonate	471-34-1	75-90
Silica-Crystalline Quartz (1)	14808-60-7	0.01-1.5

(1) Calcium carbonate may contain crystalline silica at levels between 0.01% - 1.50% and varies naturally.

SUPPLIER: DELTA COLOURS INC.
MANUFACTURER: DELTA COLOURS INC.
6369 PEACHTREE ST NE
NORCROSS, GA 30071

☎ **EMERGENCY TELEPHONE NO:** 770-277-8819 or 800-866-6981

DATE PREPARED – 03/15/2007

SECTION 2 – HAZARDOUS INGREDIENTS

NO KNOWN HAZARDOUS COMPONENTS

SECTION 3 – PHYSICAL DATA

APPEARANCE: BLUE POWDER
ODOR: NONE
SOLUBILITY IN WATER: 0.3%
BULK DENSITY: N/A

SECTION 4 – FIRE AND EXPLOSION HAZARD DATA

EXTINGUISHING MEDIA: WATER, DRY CHEMICAL, CARBON DIOXIDE, AND FOAM.

UNUSUAL FIRE AND EXPLOSION HAZARDS: PRODUCT IS PRODUCED TO MINIMIZE DUSTING, BUT SINCE MOST POWDER PRODUCTS AS DUSTS CAN FORM EXPLOSIVE MIXTURES WITH AIR, HANDLE TO AVOID DUSTING CONDITIONS. PRODUCT NOT CONSIDERED A FIRE HAZARD, BUT MAY BURN OR SMOLDER IF IGNITED.

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SECTION 5 – REACTIVITY HAZARDS AND INFORMATION

STABILITY: STABLE

HAZARDOUS DECOMPOSITION PRODUCTS: NONE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

THERMAL DECOMPOSITION: 350C

SECTION 6 – HEALTH HAZARDS AND INFORMATION

EYE CONTACT: DIRECT EYE CONTACT MAY CAUSE IRRITATION BY MECHANICAL ABRASION.
SKIN CONTACT: DIRECT EYE CONTACT MAY CAUSE IRRITATION BY MECHANICAL ABRASION.
EFFECTS OF CHRONIC OVEREXPOSURE: AS TRUE WITH ANY MINERAL PRODUCT, LONG TERM OVEREXPOSURE TO HIGH CONCENTRATIONS OF DUST WITHOUT THE USE OF A DUST MASK MAY PRODUCE X-RAY EVIDENCE OF RESPIRATORY DYSFUNCTION IN SOME INDIVIDUALS.
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: INHALING RESPIRABLE DUST MAY AGGRAVATE EXISTING RESPIRATORY SYSTEM DISEASE(S) AND/OR DYSFUNCTION. EXPOSURE TO DUST MAY AGGRAVATE EXISTING SKIN AND OR EYE CONDITIONS.

SECTION 7 – PRECAUTIONS FOR SAFE HANDLING, USE/DISPOSAL

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: SPILLS SHOULD BE CLEANED UP USING SPECIAL VACUUM CLEANERS OR WET MOPPING. IF THESE METHODS ARE NOT FEASIBLE, THE BULK OF THE SPILL MAY BE SWEPT UP TAKING CARE TO AVOID EXPOSURE TO DUSTS. RESIDUES AND MINOR QUANTITIES OF DYESMAY BE FLUSHED TO A DRAIN IF ACCEPTABLE TO THE WASTEWATER TREATMENT PLANT. FOLLOW ALL PRECAUTIONS FOR HANDLING THIS PRODUCT WHEN DEALING WITH SPILLS.

WASTE DISPOSAL METHOD: SPILLED MATERIALS SHOULD BE RETURNED TO USE, IF POSSIBLE. IF NOT, WASTE MATERIAL MAY BE DUMPED OR INCINERATED UNDER CONITIONS WHICH MEET ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL CONTROL REGULATIONS.

SECTION 8 – CONTROL AND PROTECTIVE MEASURES – SPECIAL USE PRECAUTIONS

RESPIRATORY PROTECTION: AN APPROPRIATE NIOSH APPROVED RESPIRATOR OR DUST SHOULD BE WORN WHEN HANDLING THIS PRODUCT.

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VENTILATION: USE OF LOCAL VENTILATION IS SUGGESTED WHEN USING THIS PRODUCT. HOWEVER, USE OF GOOD GENERAL VENTILATION IS ACCEPTABLE.

EYE PROTECTION: WEAR SAFETY GLASSES WITH SIDE SHIELDS.

OTHER PROTECTIVE EQUIPMENT: WEAR IMPERMEABLE RUBBER OR PLASTIC GLOVES. WEAR A RUBBER OR PLASTIC APRON. WEAR NORMAL WORK CLOTHES – LONG SLEEVED SHIRT AND PANTS – CLEAN EVERY SHIFT.

OTHER PRECAUTIONS TO BE TAKEN IN HADLING AND STORING: STORE WITH CONTAINER CLOSED IN A DRY PLACE AWAY FROM EXCESSIVE HEAT AND OPEN FLAMES. AVOID UNNECESSARY PERSONAL CONTACT.

SECTION 9 – EMERGENCY FIRST AID INFORMATION

INHALATION: REMOVE TO FRESH AIR. GET MEDICAL ATTENTION.

INGESTION: GET IMMEDIATE MEDICAL ATTENTION.

SKIN: WASH SKIN CONTACT WITH SOAP AND WATER. IF IRRITATION DEVELOPS, GET MEDICAL ATTENTION.

EYES: IMMEDIATELY FLUSH EYE CONTACT WITH LARGE AMOUNTS OF WATER FOR ATLEAST 15 MINUTES AND THE GET MEDICAL ATTENTION.

SECTION 10 – TRANSPORTATION INFORMATION

DOT HAZARD CLASSIFICATION: NOT REGULATED BY DOT

SECTION 11 – LABEL INFORMATION

DO NOT GET ON SKIN OR IN EYES.

RESPIRATORY PROTECTION: AN APPROPRIATE NIOSH APPROVED RESPIRATOR FOR DUST SHOULD BE WORN.

CAS#	COMPONETS
57455-37-5	PIGMENT BLUE 29
471-34-1	CALCIUM CARBONATE
14808-60-7	SILICA-CRYSTALLINE QUARTZ

EMERGENCY FIRST AID PROCEDURES:

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INHALATION: REMOVE TO FRESH AIR. GET MEDICAL ATTENTION.

INGESTION: GET IMMEDIATE MEDICAL ATTENTION.

SKIN: WASH SKIN CONTACT WITH SOAP AND WATER. IF IRRITATION DEVELOPS, SEEK MEDICAL ATTENTION.

EYES: IMMEDIATELY FLUSH EYE CONTACT WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES AND THEN SEEK MEDICAL ATTENTION.

GOOD INDUSTRIAL PRACTICE: IN ACCORDANCE WITH GOOD INDUSTRIAL PRACTICE, AVOID ALL PERSONAL CONTACT. WEAR WORK CLOTHES WITH LONG SLEEVES, CLEAN EVERY SHIFT. WEAR GOGGLES OR SIDE SHIELD SAFETY GLASSES, IMPERMEABLE GLOVES AND APRON. FOR GOOD HYGIENE A SHOWER AT THE END OF EVERY SHIFT IS RECOMMENDED. WASH WELL BEFORE EATING.

DISPOSAL: DISPOSE OF SPILLED PRODUCT, EMPTY CONTAINERS AND UNUSED PRODUCT IN COMPLIANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.

EMPTY CONTAINERS: RESIDUES OF THIS PRODUCT MAY REMAIN IN EMPTIED CONTAINERS. CONTAINERS SHOULD NOT BE REUSED WITHOUT PROFESSIONAL CLEANING AND RECONDITIONING. EMPTY CONTAINERS SHOULD BE RINSED BEFORE DISPOSAL. FOLLOW ALL PRECAUTIONS ON LABEL WHEN DEALING WITH EMPTY CONTAINERS.

ATTENTION: FOR MANUFACTURING USE ONLY. REFER TO OUR MATERIAL SAFETY DATA SHEET (MSDS) FOR COMPLETE DETAILS.

SECTION 12 – ENVIRONMENTAL EFFECTS INFORMATION

NO SIGNIFICANT HARMFUL ENVIRONMENTAL EFFECTS ARE KNOWN.

SECTION 13 – REFERENCES

NONE

SECTION 14 – FEDERAL AND STATE REGULATORY INFORMATION

NOT CLASSIFIED AS HARZARDOUS MATERIAL PER 40 CFR 261.24 OR 261.3

WE BELIEVE ALL THE DATA AND INFORMATION GIVEN IS ACCURATE AS OF THE DAY OF PREPARATION AND IS OFFERED IN GOOD FAITH, BUT WITHOUT WARRANTY OR REPRESENTATION. SINCE CONDITIONS OF USE ARE BEYOND OUR CONTROL WE DISCLAIM ALL LIABILITY FOR RELIANCE THEREON. THIS IS OFFERED SOLELY FOR YOU CONSIDERATION, INVESTIGATION AND VERIFICATION.

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SAFETY DATA SHEET

IRWIN Chalk – Light Violet, Dust-Off	October 23, 2013
	Revision 1

1. PRODUCT and COMPANY IDENTIFICATION

Commercial Product Name: IRWIN Chalk – Light Violet, Dust-off
Company: IRWIN Tools
Use of product: Snap line, mark
Emergency contact: 1-800-464-7946 8:00am-5:00pm Monday-Friday

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Non-combustible violet solid powder with no odor. Irritating to eyes, skin, and respiratory system. Exposure to large quantities of this material may cause acute irritation of eyes and difficulty breathing.

OSHA GHS Hazard Statements (Warning Label)

DANGER – May cause cancer (lung) *(Category 1A)*

Hazard Ratings:

Hazardous Material Identification System (HMIS):

Health 1*, Flammability 0, Reactivity 0 *chronic effects

National Fire Protection Association (NFPA):

Health 1, Flammability 0, Reactivity 0

Eye: May cause irritation. Chalk dust is discomforting and abrasive to the eyes.

Skin: Prolonged skin contact may cause irritation. When the product is used as intended, it is unlikely to cause discomfort.

Ingestion: Ingestion of large amounts may cause gastrointestinal irritation. Ingestion is considered an unlikely route of entry in commercial or industrial environments.

Inhalation: Dust may be discomforting to the upper respiratory tract and lungs. Considered a low risk hazard when the product is used as intended.

Chronic: Repeated and prolonged inhalation exposure to crystalline silica dust above exposure limits may cause delayed, chronic lung injury (silicosis). When the project is used as intended, dust levels should not exceed exposure limits. See Sections 8 and 11.

DANGER

WARNING

Obtain special instructions before use. May cause cancer by inhalation. Avoid breathing dust or fume. Causes serious eye irritation. Causes mild skin irritation. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance name	Value (%)	CAS No.	EC No.
Talc [1]	94 - 95	14807-96-6	238-877-9
Sodium Aluminum Sulfosilicate	4.8 - 5.2	12769-96-9	--
Silica (crystalline quartz)[1]	0.1 - 1	14808-60-7	238-878-4

[1] Talc may contain crystalline silica at levels between 0.1 and 1.0 % and varies naturally.

4. FIRST AID MEASURES

Inhalation: Remove from exposure and move to fresh air immediately.
Encourage the patient to blow nose to ensure clear breathing passages.
If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Get medical aid if cough or other symptoms appear.

Skin contact: Wet clothing first to minimize dust generation, then; remove contaminated clothing and shoes. Launder contaminated clothing before wearing again.
Wash affected area with water (and soap if available)
Get medical aid in the event of irritation.

Eye contact: Do not rub eyes, rubbing may cause abrasions. Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.
Get medical aid.

Ingestion: Wash mouth out with plenty of water. If the victim is conscious and alert, give 2-4 cupfuls of milk or water. Do not induce vomiting unless directed to do so by medical personnel.
Get medical aid immediately.

Additional advice: Show this safety data sheet to the doctor in attendance

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Substance is noncombustible.

Explosion: No information found.

Specific hazards: Not considered to be a significant fire risk, however; the containers may burn, releasing carbon monoxide, and carbon dioxide.

Special protective equipment for Firefighters: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Wear appropriate personal protective equipment as specified in Section 8.

Environmental precautions: Do not allow this material to be released to the environment without proper governmental permits.

Methods for cleaning up: Recover the product whenever possible. Avoid generating dust when sweeping/shoveling up. If required, wet the material with water to prevent creating dust. Pick up and place in a suitable container for reclamation or disposal. Follow applicable OSHA regulations (29 CFR 1910.120)

7. HANDLING AND STORAGE

Storage: Store this product in a tightly-closed container in a dry, well-ventilated area away from incompatible substances.

Handling: Avoid creating, or breathing dust. Practice good personal hygiene, (hand washing, etc.) after using this product. Avoid contact with skin and eyes.

Packaging material: No information found.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	CAS No.	% by weight	Exposure Limit 8-Hour TWA[1] (mg/m^3) OSHA PEL	ACGIH TLV	NIOSH REL
Talc[4]	14807-96-6	94-95	10[2,5],3.3[3,5]	2[3]	2[3]
Sodium Aluminum Sulfosilicate-Pigment Violet C.I.77007	12769-96-9	4.8-5.2	10[3]	5[3]	5
Silica-Crystalline Quartz[4]	14808-60-7	0.1-1.0	10[2,5],3.3[3,5]	0.05[3]	0.05[3]

[1] TWA = Time-weighted average
[2] Total dust.
[3] Respirable dust.
[4] Talc may contain crystalline silica at levels between 0.1 and 1.0 % and varies naturally.
[5] Using the OSHA quartz formula, this PEL was calculated assuming crystalline silica content of 1.0% in this ingredient.

Exposure and Engineering Controls: Facilities storing or utilizing this material should have potable water available for washing eyes and skin. Use sufficient general area (or outdoor) ventilation. Local exhaust ventilation should be used if airborne concentrations of dust exceed limits cited in Section 8.

Personal protective equipment:
Hand protection: Wear protective gloves
Eye protection: Wear safety glasses, or chemical goggles in windy conditions or where eye contact is possible.
Respiratory protection: When engineering controls are not sufficient to reduce exposure, seek professional advice prior to respirator selection and use. Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Hygiene measures: Wash contaminated clothing before reuse.
Environmental exposure controls: No information found.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Powder
Color:	Light Violet
Odor:	Odorless.
pH (at 10% solids):	No data available.
Boiling point/range:	No data available.
Melting point/range:	Loss of sulfur above 752 °F (400°C).
Flash point:	No data available.
Evaporation rate:	No data available.
Vapor density:	No data available.
Solubility in water:	<0.0002 (Trace)
Explosive properties:	No data available.
Oxidizing properties:	No data available.
Vapor pressure:	No data available.
Relative density (H_2O=1):	2.68.
Viscosity:	No data available.
Partition coefficient (n-octanol/water):	No data available.

10. STABILITY AND REACTIVITY

Stability: Stable under normal temperatures and pressures.

Hazardous decomposition products: Hydrogen sulfide gas, Sulfur dioxide, Carbon monoxide, and Carbon dioxide.

Materials to avoid: Acids.

Conditions to avoid: At temperatures above 752 °F in the presence of air, an exothermic chemical reaction can occur with the evolution of sulfur dioxide gas. Contact with acids liberates hydrogen sulfide gas

Hazardous Polymerization: Does not occur.

11. TOXICOLOGICAL INFORMATION

Note: Toxicological effects described in this section are those that would be expected based on data from the components of this product.

Acute toxicity: No data reported.

Inhalation: (Silica, crystalline quartz) Human: LC_{Lo}: 300 µg/m^3/ intermittent exposure over a 10-year period produced pulmonary system effects.

Skin contact: (Talc) Human: 0.3mg administered intermittently for 3 days produced mild skin irritation.

Eye contact: No data reported.

Ingestion: (Sodium aluminum sulfosilicate) No species reported: LD_{50}: >10,000 mg/kg.

Chronic toxicity/Carcinogenicity: Repeated and prolonged inhalation exposure to crystalline silica dust above exposure limits may cause delayed, chronic lung injury (silicosis). When the product is used as intended, dust levels should not exceed exposure limits.

Quartz – crystalline silica:
The International Agency for Research on Cancer (IARC) has designated this substance Group 1, “carcinogenic to humans”.
The National Toxicology Program (NTP) has designated this substance: Group K “known to be a human carcinogen”
American Conference of Governmental Industrial Hygienists (ACGIH) has designated this substance A2; suspected human carcinogen. The agent is carcinogenic in experimental animals at dose levels, by route of administration, at sites of histologic type(s) or by mechanism(s) considered relevant to worker exposure. Available epidemiologic studies are conflicting or insufficient to confirm an increased risk of cancer in exposed humans.

12. ECOLOGICAL INFORMATION

Bioaccumulation: No information found.
Ecotoxicity: Sodium Aluminum Suflosilicate-Pigments are very stable, except under acidic conditions when they will decompose to white siliceous material with the evolution of hydrogen gas. These pigments pose no threat to the environment if disposed of responsibly.

13. DISPOSAL CONSIDERATIONS

Waste from residues of this product is <u>not</u> a hazardous waste according to U.S. Environmental Protection Agency (EPA) regulations. Disposal by landfill may be acceptable.
Consult an expert on the disposal of recovered material for compliance with state, provincial, and/or local regulations.

14. TRANSPORT INFORMATION

U.S. DOT: Not regulated

ADR/RID: Not regulated

IMDG: Not regulated

ICAO/IATA: Not regulated

15. REGULATORY INFORMATION

U.S. Federal Regulations
OSHA: Ingredients are listed as air contaminants (29 CFR 1910.1000).
Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

TSCA (Toxic Substance Control Act): All components of this product are listed on the TSCA inventory.

CERCLA: Hazardous Substance, (40 CFR 302.4): Not Listed.
Extremely Hazardous Substance (40 CFR 355): Not Listed.

SARA Hazard Category: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following category:
"An immediate (acute) and chronic health hazard."

Chemicals subject to the reporting requirements of Section 313 or Title III of SARA and 40 CFR Part 372: None.

STATE REGULATIONS:
California's "Safe Drinking Water and Toxic Enforcement Act of 1986" (Proposition 65)

This product contains the following Proposition 65 regulated materials known to the State of California to cause cancer or reproductive harm. The listed typical amounts are a result of their natural presence in the raw materials from which this product is produced.

Silica-crystalline quartz	equal to, or less than 1.0 percent

CANADA WHIMS: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation (CPR), and the SDS contains all of the information required by the CPR.
WHIMS Classification: D2A

16. OTHER INFORMATION

The contents and format of this SDS are in accordance with the U.S. Hazard Communication Standard 29 CFR 1910.1200; the Canadian CPR, and Workplace Hazardous Materials Information System (WHMIS); and EEC Commission Directive 1999/45/EC, and EEC Commission Regulation 1907/2006/EC (REACH) Annex II.

DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product.
If the product is used as a component in another product, this SDS information may not be applicable.

End of document

Strait Line Marking Chalk Red by American Tool

Material Safety Data Sheet

SECTION I - Material Identity
SECTION II - Manufacturer's Information
SECTION III - Physical/Chemical Characteristics
SECTION IV - Fire and Explosion Hazard Data
SECTION V - Reactivity Data
SECTION VI - Health Hazard Data
SECTION VII - Precautions for Safe Handling and Use
SECTION VIII - Control Measures
SECTION IX - Label Data
SECTION X - Transportation Data
SECTION XI - Site Specific/Reporting Information
SECTION XII - Ingredients/Identity Information

SECTION I - Material Identity

Item Name	
Part Number/Trade Name	STRAIT-LINE MARKING CHALK (RED)
National Stock Number	7510005799536
CAGE Code	AMTOO
Part Number Indicator	A
MSDS Number	191402
HAZ Code	A

SECTION II - Manufacturer's Information

Manufacturer Name	AMERICAN TOOL COMPANIES INC
Street	92 GRANT STREET
City	WILMINGTON
State	OH
Country	US
Zip Code	45177
Emergency Phone	800-424-9300 CHEMTREC
Information Phone	937-382-3811

MSDS Preparer's Information

Date MSDS Prepared/Revised	20DEC99
Active Indicator	N

Alternate Vendors

SECTION III - Physical/Chemical Characteristics

Appearance/Odor	RED POWDER
Boiling Point	NA
Melting Point	1517 F
Vapor Pressure	NA
Vapor Density	NA
Specific Gravity	3.2
Solubility in Water	<0.0002 (TRACE)
Percent Volatiles by Volume	0
Container Type	R
Container Pressure Code	1
Temperature Code	4
Product State Code	S

SECTION IV - Fire and Explosion Hazard Data

Flash Point Method	NA
Lower Explosion Limit	NA
Upper Explosion Limit	NA
Extinguishing Media	NON COMBUSTIBLE. USE ANY MEDIA SUITABLE FOR THE SURROUNDING FIRES
Special Fire Fighting Procedures	SPECIAL FIRE FIGHTING PROCEDURES ARE NOT APPLICABLE
Unusual Fire/Explosion Hazards	NR

SECTION V - Reactivity Data

Stability	YES
Stability Conditions to Avoid	STABLE UNDER NORMAL STORAGE AND HANDLING CONDITIONS
Materials to Avoid	HYDRAZINE, CALCIUM HYPOCHLORITE, PERFORMIC ACID AND BROMINE PENTAFLUORIDE. IGNITES ON CONTACT WITH FLUORINE. REACTS WITH STRONG ACIDS TO LIBERATE CARBON DIOXIDE

Hazardous Decomposition Products NONE IDENTIFIED
Hazardous Polymerization NO
Polymerization Conditions to Avoid WILL NOT OCCUR

SECTION VI - Health Hazard Data

Route of Entry: Skin YES
Route of Entry: Ingestion YES
Route of Entry: Inhalation YES
Health Hazards - Acute and Chronic NON-COMBUSTIBLE RED SOLID POWDER WITH NO ODOR. EXPOSURE TO LARGE QUANTITIES OF THIS MATERIAL MAY CAUSE ACUTE IRRITATION OF EYES AND RESPIRATORY SYSTEM. EXPOSURE TO STRAIT-LINE MARKING CHALK (R) IS PRIMARILY THROUGH CONTACT WITH DUST FROM THIS MATERIAL CREATED DURING HANDLING AND USE OF THE CHALK. ACUTE HEALTH EFFECTS INCLUDE MINOR IRRITATION OF THE EYES, SKIN AND RESPIRATORY TRACT
Carcinogenity: NTP NO
Carcinogenity: IARC NO
Carcinogenity: OSHA NO
Explanation of Carcinogenity NONE
Symptoms of Overexposure [INHAL] ACUTE EXPOSURE TO DUST LEVELS ABOVE EXPOSURE LIMITS MAY CAUSE IRRITATION OF THE RESPIRATORY SYSTEM WITH SNEEZING AND COUGHING. [EYE] CONTACT WITH DUST OR POWDER MAY CAUSE MECHANICAL IRRITATION AND PAIN, WATERING OF EYES, AND EYELID INFLAMMATION. [SKIN] PROLONGED SKIN CONTACT MAY PRODUCE MODERATE IRRITATION. [INGEST] NO KNOWN EFFECTS
Medical Cond. Aggrevated by Exposure NR
Emergency/First Aid Procedures [INHAL] REMOVE TO FRESH AIR. RESTORE AND OR SUPPORT BREATHING AS NEEDED. COUGH, SPIT OUT AND BLOW NOSE TO REMOVE DUST. [EYE] RUBBING EYES MAY CAUSE ABRASIONS. GENTLY LIFT THE EYELIDS AND FLUSH IMMEDIATELY AND CONTINUOUSLY WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MIN OR UNTIL THE PERSON IS TRANSPORTED TO AN EMER MED FACILITY. [SKIN] WET CLOTHING FIRST TO MINIMIZE DUST GENERATION, REMOVE CONTAMINATED CLOTHING, LAUNDER BEFORE REUSE. DO NOT SHAKE OR BLOW DUST OFF CLOTHING OR BODY. WASH AFFECTED SKIN WITH SOAP/ WATER. [INGEST] DRINK 2 TO 3 GLASSES OF WATER. DO NOT INDUCE VOMITING. CONSULT PHYS

SECTION VII - Precautions for Safe Handling and Use

Steps if Material Released/Spilled CLEANUP PERSONNEL NEED PROTECTION AGAINST EYE CONTACT AND DUST INHALATION. AVOID CREATHING DUST DURING CLEANUP. SHOVEL THE MATERIAL OR USE HEPA FILTERED VACUUM, WET SWEEPING COMPOUND OR WATER FOR CLEANUP SO THAT AIRBORNE DUST DOES NOT EXCEED EXPOSURE LIMITS. DO NOT DRY SWEEP. DO NOT BLOW WITH AIR WHICH COULD CAUSE A DUSTING PROBLEM. FOLLOW APPLICABLE OSH REGULATIONS (29 CFR 1910.120)
Neutralizing Agent NR
Waste Disposal Method THIS MATERIAL IS NOT A LISTED WASTE. REVIEW

FEDERAL, STATE AND LOCAL GOVERNMENT REQUIREMENTS PRIOR TO DISPOSAL. DISPOSAL BY LANDFILL MAY BE ACCEPTABLE

Handling and Storage Precautions	STORE IN CLOSED CONTAINER AND HANDLE SO AS TO MINIMIZE DUSTING OR ANY MATERIAL LEAKS. PRACTICE GOOD PERSONAL HYGIENE, (HAND WASHING, ETC) AFTER USING ,MATERIAL, EXPECIALLY BEFORE EATING, DRINKING, SMOKING OR APPLYING COSMETICS
Other Precautions	NR

SECTION VIII - Control Measures

Respiratory Protection	NIOSH APPROVED RESPIRATOR FOR DUST IF PEL IS EXCEEDED
Ventilation	SUFFICIENT GENERAL AREA VENTILATION
Protective Gloves	NOT USUALLY REQUIRED
Eye Protection	PROTECTIVE EYEGLASSES OF CHEM SAFETY GOGGLES
Other Protective Equipment	NR
Work Hygenic Practices	USE GOOD INDUSTRIAL HYGIENE PRACTICES IN HANDLING THIS MATERIAL

SECTION IX - Label Data

Protect Eye	YES
Protect Skin	NO
Protect Respiratory	YES
Chronic Indicator	NO
Contact Code	NONE
Fire Code	UNKNOWN
Health Code	UNKNOWN
React Code	UNKNOWN
Specific Hazard and Precaution	NO TARGET ORGANS LISTED FOR CHRONIC EXPOSURES

SECTION X - Transportation Data

SECTION XI - Site Specific/Reporting Information

Volatile Organic Compounds (P/G)	0
Volatile Organic Compounds (G/L)	0

SECTION XII - Ingredients/Identity Information

Ingredient #	01
Ingredient Name	*CALCIUM CARBONATE (75-85%)
CAS Number	471341
Proprietary	NO
Percent	85
Ingredient #	02
Ingredient Name	*LIMESTONE (COMBINED WITH 471-34-1)
CAS Number	1317653
Proprietary	NO
Percent	0
Ingredient #	03
Ingredient Name	*RED IRON OXIDE (10-20%)
CAS Number	1332372
Proprietary	NO
Percent	20
Ingredient #	04
Ingredient Name	*MAGNESITE (4-6%)
CAS Number	546930
Proprietary	NO
Percent	6
Ingredient #	05
Ingredient Name	*SILICA-CRYSTALLINE QUARTZ (0.01-1.5%)
CAS Number	14808607
Proprietary	NO
Percent	1.5

MATERIAL SAFETY DATA SHEET

Date Issued: 12/24/02

American Tool Companies, Inc.
Wilmington Division
92 Grant Street
Wilmington, Ohio 45177

Technical Contact: Jeff Curry
(937) 382-3811 (8:00-5:00 EST)

1. SUBSTANCE IDENTIFICATION

Substance Name: **Strait-Line® Marking Chalk (Blue)**
Description: Powdered Chalk
General Use: Refill for self-chalking chalk line reels

2. COMPOSITION/INGREDIENT INFORMATION

			Exposure Limit 8-Hour TWA (mg/m^3)		
Component	CAS No.	% by weight	OSHA PEL	ACGIH TLV	NIOSH REL
Calcium Carbonate (Limestone)	471-34-1; (1317-65-3)	75-85	15[1] 5[2]	10[1]	10[1] 5[2]
Sodium Alumino Sulphosilicate	57455-37-5	10-20	15[1] 5[2]	10[1] 3[2]	
Magnesite	546-93-0	4-6	15[1] 5[2]	10[1]	15[1] 5[2]
Silica-Crystalline Quartz[3]	14808-60-7	0.01-3.0	2.0[2,4]	0.05[2]	0.05[2]

[1] Total dust.
[2] Respirable dust.
[3] Calcium carbonate may contain crystalline silica at levels between 0.01 and 4.0 % and varies naturally.
[4] Using the OSHA quartz formula, this PEL was calculated assuming a crystalline silica content of 3.0% in this ingredient.
TWA = Time-weighted average.

3. HAZARDS IDENTIFICATION

Hazardous Material Identification System (HMIS):
Health 1*, Flammability 0, Reactivity 0. *chronic effects

EMERGENCY OVERVIEW: Non-combustible blue solid powder with no odor. Mildly irritating to eyes, skin, and respiratory system. Exposure to large quantities of this material may cause acute irritation of eyes and difficulty breathing.

POTENTIAL HEALTH EFFECTS: Exposure to Strait-Line® Marking Chalk is primarily through contact with dust from this material created during handling and use of the chalk. Acute health effects include minor irritation of the eyes, skin, and respiratory tract.

INHALATION: Acute exposure to dust levels above exposure limits (Section 2) may cause irritation of the respiratory system with sneezing and coughing.

EYE CONTACT: Contact with dust or powder may cause mechanical irritation and pain, watering of eyes, and eyelid inflammation.

SKIN CONTACT: When the product is used as intended, it is not considered to cause discomfort. Prolonged skin contact may produce moderate irritation.

INGESTION: Considered an unlikely route of entry in commercial/industrial environments. Small amounts of low dose rates are regarded as practically non-harmful. This material acts as a mild laxative. In excessive quantity, may cause stomach distension with pain.

CHRONIC: Repeated and prolonged inhalation exposure to crystalline silica dust above exposure limits may cause delayed, chronic lung injury (silicosis). When the product is used as intended, dust levels should not exceed exposure limits. See Sections 2 and 11.

4. FIRST AID MEASURES

INHALATION: Remove exposed person to fresh air; restore and/or support his or her breathing as needed. Encourage the victim to cough, spit out, and blow nose to remove dust. Seek medical attention if irritation or discomfort persist.

EYE CONTACT: Rubbing eyes may cause abrasions. Gently lift the eyelids and flush immediately and continuously with copious amounts of water for at least 15 minutes. If irritation continues, seek medical attention.

SKIN CONTACT: Wet clothing first to minimize dust generation, then remove contaminated clothing. Do not shake or blow dust off clothing or body. Wash affected skin with soap and water. Launder contaminated clothing before wearing again. Seek medical attention in event of irritation.

INGESTION: Never give anything by mouth to an unconscious person. Rinse mouth out with plenty of water. If ingested, have that conscious person drink 2 to 3 glasses of water, do not induce vomiting. Consult with a physician or medically trained personnel at a poison control center.

5. FIRE-FIGHTING MEASURES

FLASHPOINT: None identified.

FLAMMABLE LIMITS: None identified.

AUTOIGNITION TEMPERATURE: None identified.

HAZARDOUS COMBUSTION PRODUCTS: In fires sustained by other combustible material, this product may undergo chemical change with the release of heat, and toxic, irritating sulfur dioxide gas.

EXTINGUISHING MEDIA: This material is noncombustible. Use extinguishing agents that will put out the surrounding fire.

FIRE-FIGHTING INSTRUCTIONS: Suitable breathing apparatus should be worn by fire-fighters.

6. ACCIDENTAL-RELEASE MEASURES

Notify safety and environmental personnel of spills or leaks. For large spills (e.g. more than 8 ounces), cleanup personnel need protection against eye contact and dust inhalation. Prevent spillage from entering sewers, or storm sewers, which includes sinks, toilets, and floor drains. Recover the product whenever possible. Avoid creating dust during cleanup. Shovel the material or use high-efficiency particulate air (H.E.P.A.) filtered vacuum, wet sweeping compound or water for cleanup so that airborne dust does not exceed exposure limits. **Do not dry sweep. Do not blow with air, which could cause a dusting problem**. Follow applicable OSHA regulations (29 CFR 1910.120).

7. HANDLING AND STORAGE

HANDLING: Store this material in a closed container and handle so as to minimize dusting or any material leaks. Do not mix with acids. Practice good personal hygiene after using this material. Keep containers closed when not in use.

STORAGE: Do not store near acids. Do not store in areas where there is a risk of fire.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use sufficient general area ventilation. Local exhaust ventilation should be used if airborne levels of dust exceed the exposure limits cited in Section 2.

RESPIRATORY PROTECTION: When engineering controls are not sufficient to reduce exposure, seek professional advice prior to respirator selection and use. Wear NIOSH-approved respirator selected per OSHA 29 CFR 1910.134 to reduce concentrations inside the respirator below exposure limits cited in Section 2.

SKIN PROTECTION: No special equipment needed when handling small quantities, e.g. refilling chalk-line reel.

EYE PROTECTION: Wear protective eyeglasses or chemical safety goggles in windy conditions or where eye contact is possible, as required by OSHA regulations (29 CFR 1910.133).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Blue
Physical State:	Powder
Odor:	None
pH: (at 10% solids)	8.5-9.5
Boiling Point:	Not applicable
Melting Point:	Decomposes at 1517°F (825°C) (Releases sulfur above 752°F, 400°C)
Vapor Pressure (at 20°C):	Not applicable
Percent Volatile:	0
Vapor Density (Air=1):	Not applicable
Solubility in Water:	<0.0002 (Trace)
Octanol/Water Partition Coefficient:	Not applicable
Specific Gravity (H_2O=1):	2.5-2.7
Volatile organic compound (VOC) content:	0 percent

10. STABILITY AND REACTIVITY

GENERAL: This product is stable under normal storage and handling conditions.

CONDITIONS TO AVOID: Avoid contact with acids.

CHEMICAL INCOMPATIBILITIES: Ignites on contact with fluorine. Reacts with acids to liberate carbon dioxide and sulfur dioxide.

HAZARDOUS DECOMPOSITION PRODUCTS: Sulfur dioxide and carbon dioxide.

HAZARDOUS POLYMERIZATION: Does not occur.

11. TOXICOLOGICAL INFORMATION

Note: Toxicologic effects described in this section are those that would be expected based on data for the components of the product.

EYE: (Calcium Carbonate)
Rabbit: 0.750 mg administered for 24 hours produces severe irritation.

SKIN: (Calcium Carbonate)
Rabbit: 500 mg administered for 24 hours produces moderate skin irritation.

INGESTION: (Calcium Carbonate) Rat: LD_{50}: 6450 mg/kg.
(Sodium Alumino Sulphosilicate) Rat: LD_{50}: > 10,000 mg/kg.

INHALATION: (Silica, Crystalline-Quartz)
Human: LC_{Lo}: 300 µg/m^3 intermittent exposure over a 10 year period produced pulmonary system effects.

TARGET ORGANS: Eyes, respiratory tract, and skin.

CHRONIC/CARCINOGENICITY: The International Agency for Research on Cancer (IARC) has designated Silica, Crystalline-Quartz: Group 1A, carcinogenic to humans; National Toxicology Program (NTP), Group K, known to be a human carcinogen.

TERATOLOGY: No data.

REPRODUCTION: No data.

MUTAGENICITY: No data.

12. ECOLOGICAL INFORMATION

Limestone and other ingredients are not classified as a "toxic pollutant" or a "hazardous substance" under Section 307 and 311 of the Clean Water Act. The pigment in this product is extremely stable, except under acidic conditions, where it will decompose to white siliceous material with the evolution of hydrogen sulfide.

13. DISPOSAL CONSIDERATIONS

RCRA Hazardous Waste (40 CFR 261): This materials in this product are not listed wastes. Review Federal, state and local government requirements prior to disposal. Do not dispose of the product in storm sewer or sanitary sewer, which includes sinks, toilets, and floor drains. Disposal by landfill may be acceptable.

Consult an expert on the disposal of recovered material. Ensure conformity with Federal, state, and local disposal regulations.

14. TRANSPORT INFORMATION (NOT MEANT TO BE ALL INCLUSIVE) (49 CFR 172.101-2)

Department of Transportation (DOT) hazard class: Non-regulated material.
International Air Transport Association (IATA) hazard class: Non-regulated material.

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

OSHA: Ingredients are listed as air contaminants (29 CFR 1910.1000). Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

TSCA (Toxic Substance Control Act): All components of this product are listed on the TSCA inventory.

CERCLA: Hazardous Substance, (40 CFR 302.4): Not Listed

Extremely Hazardous Substance (40 CFR 355): Not Listed

SARA Hazard Category: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following category: "An immediate (acute) and chronic health hazard."

Chemicals subject to the reporting requirements of Section 313 or Title III of SARA and 40 CFR Part 372: None.

STATE REGULATIONS: California's "Safe Drinking Water and Toxic Enforcement Act of 1986" (Proposition 65).

This product contains the following Proposition 65 regulated materials known to the State of California to cause cancer or reproductive harm. The listed typical amounts are a result of their natural presence in the raw materials from which this product is produced.

arsenic	less than 2 part per million (ppm)
chromium	3 ppm
mercury	less than 0.2 ppm
lead	less than 4 ppm
nickel	less than 15 ppm
silica-crystalline quartz	less than 3.0 percent

16. OTHER INFORMATION

MSDS Status: This MSDS replaces the version dated 12/20/99. Sections 2, 3, 4, 6, 7, 8, 11, 15, and 16 have been revised.

To the best of our knowledge, the information contained herein is accurate. However, neither American Tool Companies, Inc. nor any of its subsidiaries or contractors assume any liability whatsoever for the accuracy or completeness of this information. The information relates to this specific material. It may not be valid for this material if used in combination with other materials or in any process. The user is responsible for the suitability and completeness of this information for his/her own particular use.

Prepared by: Larry Verdier, CIH, CSP, Shaw Environmental, Inc.
for the American Tool Companies, Inc.

Strontium Chloride Hexahydrate

MSDS Number: S6938 * * * * * Effective Date: 09/03/09 * * * * * Supercedes: 04/23/07

STRONTIUM CHLORIDE

1. Product Identification

Synonyms: Strontium chloride, hexahydrate
CAS No.: 10476-85-4 Anhydrous; (10025-70-4 Hexahydrate)
Molecular Weight: 267
Chemical Formula: $SrCl_2.6H_2O$
Product Codes:
J.T. Baker: 4036
Mallinckrodt: 3607, 3615, 6532, 6533, 8228

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Strontium Chloride	10476-85-4	99 - 100%	Yes

3. Hazards Identification

Emergency Overview

CAUTION! MAY BE HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.

SAF-T-DATA(tm) Ratings (Provided here for your convenience)

Health Rating: 1 - Slight
Flammability Rating: 0 - None
Reactivity Rating: 1 - Slight
Contact Rating: 2 - Moderate
Lab Protective Equip: GOGGLES; LAB COAT; PROPER GLOVES
Storage Color Code: Green (General Storage)

Potential Health Effects

Inhalation:
May cause irritation to the respiratory tract. Symptoms may include coughing and shortness of breath.
Ingestion:
Large oral doses may cause irritation to the gastrointestinal tract.
Skin Contact:
May cause irritation with redness and pain.
Eye Contact:
May cause irritation, redness and pain.
Chronic Exposure:
No adverse health effects expected.
Aggravation of Pre-existing Conditions:
Persons with impaired kidney function may be more susceptible to the effects of the substance.

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4. First Aid Measures
Inhalation:
Remove to fresh air. Get medical attention for any breathing difficulty.
Ingestion:
Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.
Skin Contact:
Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation develops.
Eye Contact:
Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

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5. Fire Fighting Measures

Fire:
Not considered to be a fire hazard.
Explosion:
Not considered to be an explosion hazard.
Fire Extinguishing Media:
Dry chemical, foam, carbon dioxide, or water spray.
Special Information:
In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

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6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust.

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7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

---

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:
None established.
Ventilation System:
A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.
Personal Respirators (NIOSH Approved):
For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:
Wear protective gloves and clean body-covering clothing.
Eye Protection:
Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

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9. Physical and Chemical Properties
Appearance:
White granular or colorless crystals
Odor:
Odorless.
Solubility:
Soluble in water.
Density:
1.96
pH:
No information found.
% Volatiles by volume @ 21C (70F):
0
Boiling Point:
Not applicable.
Melting Point:
Loses 6 waters @ 150C (302F); Anhydrous melts @ 868C (1594F).
Vapor Density (Air=1):
No information found.
Vapor Pressure (mm Hg):
No information found.
Evaporation Rate (BuAc=1):
No information found.

---

10. Stability and Reactivity
Stability:
Stable under ordinary conditions of use and storage.
Hazardous Decomposition Products:
Oxides of the contained metal and halogen, possibly also free, or ionic halogen.
Hazardous Polymerization:
This substance does not polymerize.
Incompatibilities:
Strong oxidizing agents.
Conditions to Avoid:
No information found.

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11. Toxicological Information

Oral rat LD50: 2250 mg/kg. Investigated as a mutagen.

--------\Cancer Lists\----------

Ingredient	---NTP Carcinogen--- Known	Anticipated	IARC Category
Strontium Chloride (10476-85-4)	No	No	None

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12. Ecological Information

Environmental Fate:
No information found.
Environmental Toxicity:
No information found.

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13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

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14. Transport Information

Not regulated.

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15. Regulatory Information

--------\Chemical Inventory Status - Part 1\----------

Ingredient	TSCA	EC	Japan	Australia
Strontium Chloride (10476-85-4)	Yes	Yes	Yes	Yes

--------\Chemical Inventory Status - Part 2\----------

Ingredient	Korea	--Canada-- DSL	NDSL	Phil.

Strontium Chloride Hexahydrate

Strontium Chloride (10476-85-4)	Yes	Yes	No	Yes

--------\Federal, State & International Regulations - Part 1\----------

Ingredient	-SARA 302- RQ	TPQ	------SARA 313------ List	Chemical Catg.
Strontium Chloride (10476-85-4)	No	No	No	No

--------\Federal, State & International Regulations - Part 2\----------

Ingredient	CERCLA	-RCRA- 261.33	-TSCA- 8(d)
Strontium Chloride (10476-85-4)	No	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No
SARA 311/312: Acute: Yes Chronic: No Fire: No Pressure: No
Reactivity: No (Mixture / Solid)

Australian Hazchem Code: None allocated.
Poison Schedule: None allocated.
WHMIS:
This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

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16. Other Information
NFPA Ratings: Health: 1 Flammability: 0 Reactivity: 0
Label Hazard Warning:
CAUTION! MAY BE HARMFUL IF SWALLOWED OR INHALED. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.
Label Precautions:
Avoid contact with eyes, skin and clothing.
Wash thoroughly after handling.
Avoid breathing dust.
Keep container closed.
Use with adequate ventilation.
Label First Aid:
If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. Get medical attention for any breathing difficulty. In case of contact, immediately

flush eyes or skin with plenty of water for at least 15 minutes. Get medical attention if irritation develops or persists.

Product Use:

Laboratory Reagent.

Revision Information:

No Changes.

Disclaimer:

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Prepared by: Environmental Health & Safety
Phone Number: (314) 654-1600 (U.S.A.)

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 784.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Strontium Chloride

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Serious eye damage or irritation (Category 1). Causes serious eye damage (H318).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Strontium chloride	10025-70-4	$SrCl_2 \cdot 6H_2O$	266.64	

SECTION 4 — FIRST AID MEASURES

Immediately call a POISON CENTER or physician (P310).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338).
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Sweep up, place in sealed bag or container and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Deliquescent. Store in a cool, dry place within a Flinn Chem-Saf™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White crystalline needles. Odorless.
Soluble: Water and alcohol

Melting point: 115 ^{o}C
Specific gravity: 1.930

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers.
Shelf life: Fair to poor, deliquescent. See Section 7 for further information.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Stomach pains, vomiting, diarrhea.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 2250 mg/kg (as anhydrous salt)
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (233-971-6).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 786.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Strontium Nitrate

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Oxidizing solids (Category 2). May intensify fire; oxidizer (H272). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Acute toxicity, oral (Category 4). Harmful if swallowed (H302). Do not eat, drink or smoke when using this product (P270).

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

Hazard class: Specific target organ toxicity, single exposure; respiratory tract irritation (Category 3). May cause respiratory irritation (H335). Avoid breathing dust or fumes (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Strontium nitrate	10042-76-9	$Sr(NO_3)_2$	211.63	

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water (P302+P352). **If skin irritation occurs:** Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell (P302+P301+P312).

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
Strong oxidizer. Fire and explosion risk when in contact with combustible materials.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #3. Store with amides, nitrates, nitrites and azides.
Store in a cool, dry place. Keep container tightly closed (P233). Keep and store away from clothing and combustible materials (P220). Use only in a hood or well-ventilated area (P271). Take any precautions to avoid mixing with combustibles (P221).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

White powder. Odorless.
Soluble: Water. Slightly in absolute alcohol.

Melting point: 570 ^{o}C
Specific gravity: 2.98

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with reducing agents, strong acids, and combustible materials.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 2750 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Strontium Nitrate; Hazard class: 5.1, Oxidizer; UN number: UN1507

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (233-131-9). RCRA code D001.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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00018-XXXX

MATERIAL SAFETY DATA SHEET

May be used to comply with OSHA's 29 CFR 1910.1200.

Note: Blank spaces are not permitted. If any item is not applicable or no information available, the space must be marked appropriately.

IDENTITY (AS USED ON LABEL AND LIST)

DICK BLICK STUDENT TEMPERA

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

ROCK PAINT DISTRIBUTING CORP.	(608) 868-6873
MANUFACTURER	TELEPHONE NUMBER FOR INFORMATION
365 SUNNYSIDE DR. P.O. BOX 482	(920) 563-8545
ADDRESS	EMERGENCY TELEPHONE NUMBER
MILTON, WI 53563	JULY 2007
	DATE PREPARED

SECTION 2 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS: CHEMICAL NAME & COMMON NAMES	%	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED

Contains no hazardous substand per OSHA
29 CFR 1910.1200

Material is a water based product with the AP Seal. Products with, the AP Approved Products Seal of the Art and Craft Materials Institute Inc. are certified in a program of toxicological evaluation by a medium expert to contain no material in sufficient quantities to be toxic or injurious to humans or to cause acute or chronic health problems. These products are certified by the Institute to be in accordance with the voluntary chronic hazard labeling standard ASTM D-4236. In addition, there is no physical hazard as defined within 29 CFR Part 1910.1200 (c).

SECTION 3 - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT -	Range 215-225 F	SPECIFIC GRAVITY (H2O = 1) -	Range 1.03-1.68
VAPOR PRESSURE (mm Hg & TEMPERATURE) -	N/A	MELTING POINT -	N/A
VAPOR DENSITY (AIR=1) -	lighter than air	EVAPORATION RATE (WATER = 1) -	wer than ether
SOLUBILITY IN WATER -	completely soluble in water	WATER REACTIVE -	N/A
APPEARANCE & ODOR -	various colors and odorless		

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT & METHOD USED

N/A

EXTINGUISHER MEDIA

CO2, Foam or Water

SPECIAL FIRE FIGHTING PROCEDURES

None known

UNUSUAL FIRE AND EXPLOSION HAZARDS

None

FLAMMABILITY LIMITS IN AIR % BY VOLUME

N/A

LEL	UEL
N/A	N/A

Item Numbers: 00018-0089, 00018-1001, 00018-1005, 00018-1006, 00018-1007, 00018-1008, 00018-1009, 00018-1019, 00018-1029, 00018-1039, 00018-1059, 00018-1069, 00018-2005, 00018-2006, 00018-2007, 00018-2008, 00018-2009, 00018-3005, 00018-3006, 00018-3007, 00018-3008, 00018-3009, 00018-3045, 00018-3046, 00018-3047, 00018-3048, 00018-3049, 00018-3355, 00018-3356, 00018-3515, 00018-3516, 00018-3765, 00018-3766, 00018-4005, 00018-4006, 00018-4007, 00018-4008, 00018-4009, 00018-4105, 00018-4106, 00018-4107, 00018-4108, 00018-4109, 00018-4505, 00018-4506, 00018-4507, 00018-4508, 00018-4509, 00018-4885, 00018-4886, 00018-5005, 00018-5006, 00018-5007, 00018-5008, 00018-5009, 00018-5115, 00018-5116, 00018-5117, 00018-5118, 00018-5119, 00018-6505, 00018-6506, 00018-6507, 00018-6508, 00018-6509, 00018-7005, 00018-7006, 00018-7007, 00018-7008, 00018-7009, 00018-7075, 00018-7076, 00018-8005, 00018-8006, 00018-8007, 00018-8008, 00018-8009, 00018-8015, 00018-8016, 00018-8045, 00018-8046, 00018-8235, 00018-8236

SECTION 5 - REACTIVITY HAZARD DATA

STUDENT TEMPERA Page 2 of 2

STABILITY

CONDITIONS TO AVOID

> STABLE

None

UNSTABLE

INCOMPATABILITY (MATERIALS TO AVOID) N/A

HAZARDOUS DECOMPOSITION PRODUCTS N/A

HAZARDOUS POLYMERIZATION

CONDITIONS TO AVOID

MAY OCCUR

N/A

None known

WILL NOT OCCUR

SECTION 6 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENT N/A

CARCINOGEN LISTED IN N/A

INHALATION

INGESTION

NTP

OSHA

SKIN ABSORTION

NOT HAZARDOUS

IARC MONOGRAPH

> NOT LISTED

HEALTH HAZARDS

ACUTE

Refer to Section 2

CHRONIC

SIGNS AND SYMPTOMS

Not known

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

Not known

EMERGENY FIRST AID PROCEDURES - Consult a Physician Immediatley.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE/LEAK PROCEDURES

STEPS TO BE TAKEN IS MATERIAL IS SPILLED OR RELEASED

Usual Clean Up Procedure

WASTE DISPOSAL METHODS

Dispose of in accordance with Federal and Local State Regulations

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Store at room temperature.

OTHER PRECAUTIONS AND/OR SPECIAL HAZARDS

Not known

SECTION 8 - CONTROL AND PROTECTIVE MEASURES

RESPIRATORY PROTECTION (SPECIFY TYPE)

None required

VENTILATION TO BE USED

LOCAL EXHAUSE

MECHANICAL (GENERAL)

SPECIAL

None required

OTHER (SPECIFY)

PROTECTIVE GLOVES N/A

EYE PROTECTION N/A

OTHER PROTECTIVE CLOTHING AND EQUIPMENT N/A

HYGIENIC WORK PRACTICES N/A

Item Numbers: 00018-0089, 00018-1001, 00018-1005, 00018-1006, 00018-1007, 00018-1008, 00018-1009, 00018-1019, 00018-1029, 00018-1039, 00018-1059, 00018-1069, 00018-2005, 00018-2006, 00018-2007, 00018-2008, 00018-2009, 00018-3005, 00018-3006, 00018-3007, 00018-3008, 00018-3009, 00018-3045, 00018-3046, 00018-3047, 00018-3048, 00018-3049, 00018-3355, 00018-3356, 00018-3515, 00018-3516, 00018-3765, 00018-3766, 00018-4005, 00018-4006, 00018-4007, 00018-4008, 00018-4009, 00018-4105, 00018-4106, 00018-4107, 00018-4108, 00018-4109, 00018-4505, 00018-4506, 00018-4507, 00018-4508, 00018-4509, 00018-4885, 00018-4886, 00018-5005, 00018-5006, 00018-5007, 00018-5008, 00018-5009, 00018-5115, 00018-5116, 00018-5117, 00018-5118, 00018-5119, 00018-6505, 00018-6506, 00018-6507, 00018-6508, 00018-6509, 00018-7005, 00018-7006, 00018-7007, 00018-7008, 00018-7009, 00018-7075, 00018-7076, 00018-8005, 00018-8006, 00018-8007, 00018-8008, 00018-8009, 00018-8015, 00018-8016, 00018-8045, 00018-8046, 00018-8235, 00018-8236

01637-XXXX

MASTER SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY UNDERTAKING

PRODUCT NAMES	DICK BLICK STUDIO ACRYLIC, all sizes, all colours.
APPLICATIONS	Colours for artists.
SUPPLIER	Dhyan'Art Materials & Canvas Pvt. Ltd. Plot No. C6-11 - Phase II, Zone B - MEPZ-SEZ, Tambaram Chennai - 600 045 India Tel : (+91) 44.2262.5363 Fax : (+91) 44.2262.5364
E mail	

2. HAZARDS IDENTIFICATION

These preparations are not classified as dangerous according to Directive 1999/45/CE.

For the US: conformity to ASTM D4236 under evaluation. AP label expected

3. COMPOSITION/INFORMATION ON INGREDIENTS

COMPOSITION COMMENTS	These preparations do not contain any hazardous components or impurities accrding to Directive 67/548/CEE.

4. FIRST AID MEASURES

GENERAL	Get medical attention if any discomfort.
INHALATION	If the patient has difficulty breathing, call a doctor.
INGESTION	If swallowed, seek immediate medical advice and show container or label to the doctor.
SKIN	Wash the skin immediately with soap and water.
EYES	Promptly wash eyes with plenty of water while lifting the eye lids. Never use solvent. Contact physician if irritation persists.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA	RECOMMENDED : Water spray, fog or mist. Powder, foam or CO2. NOT SUITABLE : Water jet.
HAZARDOUS COMBUSTION PRODUCTS	Toxic gases/vapours/fumes: Carbon monoxide (CO). Carbon dioxide (CO2). Nitrous gases (NOx). ... .
PROTECTIVE MEASURES IN FIRE	Wear individual breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PROTECTION	Refer to protective measures listed in sections 7 and 8.
ENVIRONMENTAL PROTECTION	Do NOT discharge in sewers. Do not allow this chemical to enter the environment.
SPILL CLEANUP METHODS	Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

7. HANDLING AND STORAGE

USAGE PRECAUTIONS	Keep away from heat, sparks and open flame.
STORAGE PRECAUTIONS	Keep in original container. Keep separate from food, feedstuffs, fertilisers and other sensitive material.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION	Provide adequate general and local exhaust ventilation.
PROTECTIVE GLOVES	
HYGIENIC WORK PRACTICES	No eating or drinking while working with this material. Wash at the end of each work shift and before eating, smoking and using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Stiff pastes
COLOUR	All colours
ODOUR	Odourless or slight oil smell.
SOLUBILITY DESCRIPTION	Partly soluble in Turpentine or mineral oil
FLASH POINT (°C)	Not applicable

10. STABILITY AND REACTIVITY

STABILITY	Stable under normal storage condition.
CONDITIONS TO AVOID	Avoid heat. Avoid contact with acids and oxidising substances.
HAZARDOUS DECOMP. PRODUCTS	Fire creates toxic gases/vapours/fumes of: Carbon monoxide (CO). Carbon dioxide (CO2). Nitrous gases (NOx). ...

11. TOXICOLOGICAL INFORMATION

HEALTH HAZARDS, GENERAL	It has no toxic effect to present day knowledge.

12. ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION	Use according to the rules of good practice. Do not dispose of in the environment.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS	Recover and reclaim or recycle, if practical. Dispose of in accordance with Local Authority requirements.

14. TRANSPORT INFORMATION

GENERAL	Regulations do not apply to this product.

15. REGULATORY INFORMATION

RISK PHRASES	Not classified.
UK REGULATORY REFERENCES	Chemicals (Hazard Information & Packaging) (CHIP) Regulations 2000
EU DIRECTIVES	Commission Directive 2001/59/EC of 6 August 2001 adapting to technical progress for the 28th time Council Directive 67/548/EEC on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances (Official Journal L 225 - 21/08/2001). Dangerous preparations : Directive 99/45 amended byDirective 2001/60/EC - OJEC L226 - 22/08/2001. Directive 91/155/EEC amended by Directive 93/112/EEC and Directive 2001/58/EC : Safety data sheets.
STATUTORY INSTRUMENTS	Chemicals (Hazard Information and Packaging) Regulations.
APPROVED CODE OF PRACTICE	Classification and Labelling of Substances and Preparations Dangerous for Supply.

16. OTHER INFORMATION

USER NOTES:	This information ONLY applies to this product which conforms to the specification of Dhyan'Art Materials & Canvas Pvt. Ltd. In case of formulations or mixtures, the user must ensure that new hazards are not apparent in line with the above.

Item Numbers: 01637-0069, 01637-0129, 01637-0249, 01637-0369, 01637-0489, 01637-1020, 01637-1022, 01637-1025, 01637-1039, 01637-2040, 01637-2042, 01637-2045, 01637-2250, 01637-2252, 01637-2255, 01637-2540, 01637-2560, 01637-3060, 01637-3062, 01637-3120, 01637-3180, 01637-3182, 01637-3230, 01637-3232, 01637-3300, 01637-3310, 01637-3620, 01637-3622, 01637-3710, 01637-3712, 01637-3740, 01637-4110, 01637-4130, 01637-4132, 01637-4140, 01637-4190, 01637-4192, 01637-4280, 01637-4282, 01637-4530, 01637-4532, 01637-4540, 01637-4542, 01637-4750, 01637-5160, 01637-5162, 01637-5170, 01637-5172, 01637-5190, 01637-5192, 01637-5230, 01637-5232, 01637-5390, 01637-5430, 01637-5920, 01637-6020, 01637-6022, 01637-6070, 01637-6540, 01637-6610, 01637-7080, 01637-7090, 01637-7092, 01637-7110, 01637-7112, 01637-7120, 01637-7122, 01637-7190, 01637-7800, 01637-7802, 01637-8040, 01637-8042, 01637-8050, 01637-8052, 01637-8060, 01637-8062, 01637-8070, 01637-8122, 01637-8150, 01637-8620, 01637-9010, 01637-9330

The information contained herein is based on our knowledge of the product, at the date of publishing and it is given in good faith.
Please note the possible risks involved if this product is used for applications other than those for which it is intented.
This sheet shall only be used and reproduced for Health & Safety purposes.
The references to legislative & regulatory information and codes of practice are not exhaustive. Other applicable regulations may be considered.
It is the responsibility of the user to refer to existing legislation concerning the use, the storage and the safe handling of the product.
It is also the responsibility of the user to communicate ALL information related to the protection of Health, Safety & the Environment contained within this Material Safety Data Sheet to those persons involved in the handling of this product.

Item Numbers: 01637-0069, 01637-0129, 01637-0249, 01637-0369, 01637-0489, 01637-1020, 01637-1022, 01637-1025, 01637-1039, 01637-2040, 01637-2042, 01637-2045, 01637-2250, 01637-2252, 01637-2255, 01637-2540, 01637-2560, 01637-3060, 01637-3062, 01637-3120, 01637-3180, 01637-3182, 01637-3230, 01637-3232, 01637-3300, 01637-3310, 01637-3620, 01637-3622, 01637-3710, 01637-3712, 01637-3740, 01637-4110, 01637-4130, 01637-4132, 01637-4140, 01637-4190, 01637-4192, 01637-4280, 01637-4282, 01637-4530, 01637-4532, 01637-4540, 01637-4542, 01637-4750, 01637-5160, 01637-5162, 01637-5170, 01637-5172, 01637-5190, 01637-5192, 01637-5230, 01637-5232, 01637-5390, 01637-5430, 01637-5920, 01637-6020, 01637-6022, 01637-6070, 01637-6540, 01637-6610, 01637-7080, 01637-7090, 01637-7092, 01637-7110, 01637-7112, 01637-7120, 01637-7122, 01637-7190, 01637-7800, 01637-7802, 01637-8040, 01637-8042, 01637-8050, 01637-8052, 01637-8060, 01637-8062, 01637-8070, 01637-8122, 01637-8150, 01637-8620, 01637-9010, 01637-9330

Page 4 of 4

00683-1001

MATERIAL SAFETY DATA SHEET

May be used to comply with OSHA's 29 CFR 1910.1200)

Note: Blank spaces are not permitted. If any item is not applicable or no information available, the space must be marked appropriately.

IDENTITY (AS USED ON LABEL AND LIST)

DICK BLICK MASTER GESSO

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

ROCK PAINT DISTRIBUTING CORP.	(608) 868-6873
MANUFACTURER	TELEPHONE NUMBER FOR INFORMATION
365 SUNNYSIDE DR. P.O. BOX 482	(920) 563-8545
ADDRESS	EMERGENCY TELEPHONE NUMBER
MILTON, WI 53563	JULY 2007
	DATE PREPARED

SECTION 2 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS: CHEMICAL NAME & COMMON NAMES	%	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED

Products bearing the CP Certified Products Seal, the AP Approved Products Seal or the HL Health Label (non-toxic) Seal of the Art and Craft Materials Institute Inc. are certified in a program of toxicological evaluation by a medium expert to contain no material in sufficient quantities to be toxic or injurious to humans or to cause acute or chronic health problems. These products are certified by the Institute to be labeled in accordance with the voluntary chronic hazard labeling standard ASTM D-4236. In addition, there is no physical hazard as defined within 29 CFR Part 1910.1200 (c).

SECTION 3 - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT -	N/A	SPECIFIC GRAVITY (H2O = 1) -	N/A
VAPOR PRESSURE (mm Hg & TEMPERATURE) -	N/A	MELTING POINT -	N/A
VAPOR DENSITY (AIR=1) -	N/A	EVAPORATION RATE (WATER = 1) -	N/A
SOLUBILITY IN WATER -	N/A	WATER REACTIVE -	N/A
APPEARANCE & ODOR -	N/A		

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT & METHOD USED

N/A

EXTINGUISHER MEDIA

N/A

SPECIAL FIRE FIGHTING PROCEDURES

N/A

UNUSUAL FIRE AND EXPLOSION HAZARDS

N/A

FLAMMABILITY LIMITS IN AIR % BY VOLUME

N/A

LEL	UEL
N/A	N/A

SECTION 5 - REACTIVITY HAZARD DATA

MASTER GESSO Page 2 of 2

STABILITY CONDITIONS TO AVOID

STABLE

N/A N/A

UNSTABLE

INCOMPATABILITY (MATERIALS TO AVOID) N/A

HAZARDOUS DECOMPOSITION PRODUCTS N/A

HAZARDOUS POLYMERIZATION CONDITIONS TO AVOID

MAY OCCUR

N/A N/A

WILL NOT OCCUR

SECTION 6 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENT N/A CARCINOGEN LISTED IN N/A

INHALATION INGESTION NTP OSHA

SKIN ABSORTION NOT HAZARDOUS IARC MONOGRAPH NOT LISTED

HEALTH HAZARDS ACUTE

N/A CHRONIC

SIGNS AND SYMPTOMS N/A

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE N/A

EMERGENY FIRST AID PROCEDURES - N/A

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE/LEAK PROCEDURES

STEPS TO BE TAKEN IS MATERIAL IS SPILLED OR RELEASED

Usual Clean Up Procedure

WASTE DISPOSAL METHODS

Dispose in Trash

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

N/A

OTHER PRECAUTIONS AND/OR SPECIAL HAZARDS

N/A

SECTION 8 - CONTROL AND PROTECTIVE MEASURES

RESPIRATORY PROTECTION (SPECIFY TYPE)

N/A

VENTILATION TO BE USED LOCAL EXHAUSE MECHANICAL (GENERAL) SPECIAL

N/A OTHER (SPECIFY)

PROTECTIVE GLOVES N/A EYE PROTECTION N/A

OTHER PROTECTIVE CLOTHING AND EQUIPMENT N/A

HYGIENIC WORK PRACTICES N/A

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 789.01

Revision Date: January 16, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sucrose Solution

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **N/A**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

Product should be treated as a chemical and is not for consumption as it has been stored with other nonfood-grade chemicals.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sucrose	57-50-1	$C_{12}H_{22}O_{11}$	342.31	1-20%
Benzoic acid	65-85-0	C_6H_5COOH	122.12	0.1%
Water	7732-18-5	H_2O	18.00	80-99%
Synonym: Sugar water				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Contain spill with sand or absorbent material; deposit in sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, amines and amides.
Avoid storing for prolonged periods. Will grow mold, bacteria, or algae especially if exposed to strong light. Store in a cool, dry, dark place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes. Wash hands thoroughly after handling.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Clear, colorless liquid. Odorless.

SECTION 10 — STABILITY AND REACTIVITY

Shelf life: Poor. Benzoic acid added for mold inhibition.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

Not listed.

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: January 16, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 789.00

Revision Date: March 25, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sucrose

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **N/A**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

Product should be treated as a chemical and is not for consumption as it has been stored with other nonfood-grade chemicals.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sucrose	57-50-1	$C_{12}H_{22}O_{11}$	342.31	
Synonyms: Sugar; Table sugar; Food sprinkles; Cane sugar; Sanding sugar				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, amines and amides.
Store in a cool, dry place. Store in a Flinn Chem-Saf™ bag.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes. Wash hands thoroughly after handling.
Exposure guidelines: (as total dust) PEL 15 mg/m^3 (OSHA); TLV 10 mg/m^3 (ACGIH)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Hard, white crystals or colored spheres or cylinders. Malt-like odor.
Soluble: Water. Slightly in alcohol.

Melting point: 185-187 ^{o}C (decomposes)
Specific gravity: 1.5877
Not for human consumption.

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers.
Shelf life: Indefinite, if stored properly and kept dry.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 29,700 mg/kg
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (200-334-9).

SECTION 16 — OTHER INFORMATION

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Revision Date: March 25, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 790.00

Revision Date: February 6, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sudan III

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **N/A**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

This chemical is considered nonhazardous according to GHS classifications for the Hazard Communication Standard. Treat all laboratory chemicals with caution.

Although this material is considered to be nonhazardous, unpredictable reactions among chemicals are always possible. Prudent laboratory practices should be observed.

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sudan III	85-86-9	$C_{22}H_{16}N_4O$	352.40	
Synonyms: Solvent red 23; D&C Red no. 17; C.I. 26100				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Wash with plenty of water.
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Wipe up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #9. Store with dyes, indicators and stains.
Keep container tightly closed. Store in a cool, dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling. Will stain skin, clothing, and surfaces.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Reddish-brown powder. Odorless.
Soluble: Alcohol. Insoluble in water.

Melting point: 199 ^{o}C (decomposes)
Used to stain oils and fats.

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers and strong reducing agents.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: N.A.
Chronic effects: Liver damage
Target organs: Liver

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (201-638-4).

SECTION 16 — OTHER INFORMATION

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Revision Date: February 6, 2014

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MATERIAL SAFETY DATA SHEET

ScholAR Chemistry™

5100 W. Henrietta Rd.
West Henrietta, NY 14586
TEL: (866) 260-0501

MSDS No. 9512104 9512106 9512204
Effective Date: December 1, 2005

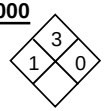
SECTION I NAME

Product	Sudan IV, Alcohol Solution
Chemical Synonyms	Chromatography Dye Solution - Red
Formula	Mixture.
CAS No.	Mixture.

24 HOUR EMERGENCY ASSISTANCE

416-984-3000

NFPA



Health	1
Flammability	3
Reactivity	2

HAZARD RATING **WHMIS**

Minimal	Slight	Moderate	Serious	Severe
0	1	2	3	4

SECTION II DANGEROUS INGREDIENTS

Name	%	TLV Units
Sudan IV: (CAS No. 85-83-6)	0.5%	N/A
Isopropyl alcohol: (CAS No. 67-63-0)	99.5%	TWA: 400 ppm; 980 mg/m^3
DANGER! FLAMMABLE!		

SECTION III PHYSICAL DATA

Melting Point (°C)	~ -90°C (IPA)	Specific Gravity (H_2O = 1)	~ 0.786 @ 20°C
Boiling Point (°C)	82°C (IPA)	Percent Volatile by Volume (%)	99.5%
Vapor Pressure (mm Hg)	33 mm (IPA)	Evaporation Rate (Ether =1)	>1
Vapor Density (Air=1)	2.1 (IPA)		
Solubility in Water	Completely.		
Appearance & Odor	Red liquid; mild odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

			Lower	Upper
Flash point	12°C (IPA)	Flammable Limits in Air % by Volume IPA	2%	12%

Firefighting Procedures

Use dry chemical, CO_2, alcohol foam, or water spray. In fire conditions, fire-fighters should wear an appropriate mask or a self-containing breathing apparatus.

Flammability and Explosion Hazards

The product is flammable. Fire or excessive heat may produce hazardous decomposition products to be produced as dust or fume. Flame may not be visible in daylight.

TDG **Class 3 Flammable liquid. UN1219**

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SECTION V REACTIVITY DATA

SS1070

Chemical Stability	Yes	X	If no, under what conditions?
	No		
Incompatible with Other products	Yes	X	May react or be incompatible with oxidizing materials.
	No		
Hazardous Decomposition Products	These products are carbon oxides and nitrogen oxides.		
Reactive under what conditions	Slightly reactive to reactive with oxidizing agents, acids.		

SECTION VI TOXICOLOGICAL PROPERTIES

Route of Entry	Ingestion. Skin contact. Inhalation.
TLV	TWA: 400 ppm; 980 mg/m^3
Toxicity for animals	Acute toxicity of the vapor (LC50): 16970 ppm (Rat).
Chronic effects on humans	The substance is toxic to the reproductive system. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs. Target organs: Central nervous system, liver, kidneys.
Acute effects on humans	Very dangerous in case of ingestion. Slightly dangerous to dangerous in case of skin contact.

SECTION VII PREVENTIVE MEASURES

Waste Disposal	Discharge, treatment, or disposal may be subject to local laws. Consult your local or regional authorities.
Storage	Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat and sources of ignition. Keep container tightly closed. Keep in a cool, well ventilated place. A refrigerated room would be preferable for materials with a flash point lower than 37.8°C (100°F).
Precautions	Avoid contact with skin and eyes. Do not ingest. Do not breathe gas, fumes, vapor or spray. Keep away from incompatibles as oxidizing agents.
Spill or leak	Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.
Protective Clothing	Splash goggles. Lab coat. Vapor respirator.

SECTION VIII FIRST AID MEASURES

Specific first aid measures

Ingestion: Call physician or Poison Control Center immediately. Induce vomiting only if advised by the appropriate medical personnel. Eye contact: Check for and remove any contact lenses. IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek medical attention. Skin contact: Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Inhalation: Move victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Allow victim to rest in a well ventilated area. Seek immediate medical attention.

SECTION IX PREPARATION OF THE MSDS

Rev. No.	5	Date	December 1, 2005	Approved	Michael Raszeja

Fiche Signalétique

ScholAR Chemistry™

5100 W. Henrietta Rd.
West Henrietta, NY 14586
TEL: (866) 260-0501

MSDS 9512104 9512106 9512204
Validé par: 1 décembre, 2005

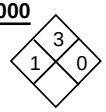
SECTION I Identification

Produit	Soudan IV, solution d'alcool
Synonymes	Colorant de Chromatography solution - rouge
Formule	Mélange.
# CAS	Mélange.

Telephone D'urgence

416-984-3000

NFPA



Santé	1
Flammabilité	3
Reactivité	2

Niveau de risque

WHMIS

Minimal	Léger	Modéré	Sérieux	Sévère
0	1	2	3	4

SECTION II Ingrédients Dangereux

Nom	%	TWA
Sudan IV: (CAS No. 85-83-6)	0,5%	Sans objet.
Alcool isopropylique: (CAS No. 67-63-0)	99,5%	400 ppm; 980 mg/m^3
DANGER! INFLAMMABLE.		

SECTION III Caractéristiques Physiques

Point de fusion (°C)	~ -90°C (IPA)	Gravité spécifique (Eau = 1)	~ 0,786 @ 20°C
Point d'ebullition (°C)	82°C (IPA)	Volatilité % par volume	99,5%
Tension de vapeur (mm Hg)	33 mm (IPA)	Taux d'évaporation (Éther =1)	>1
Densité de la vapeur (Air=1)	2,1 (IPA)		
Solubilité	Complet.		
Odeur et apparence	Liquide rouge; odeur léger.		

SECTION IV Risques D'incendie ou D'explosion

Point d'éclair	12°C (IPA)	Limites d'inflmmabilité % par volume IPA	Seuil minimal 2%	Seuil maximal 12%

1 décembre, 2005

Moyens d'extinction

Utiliser des poudres chimiques sèches, du CO_2, une mousse d'alcool ou de l'eau pulvérisée. En cas de feu, sapeur-pompeir devra porter en masque adéquate ou un respirateur autonome.

Inflammabilité et risques d'explosion

Le produit est inflammable. Le feu ou la chaleur excessive peut produire les produits dangereux de décomposition à produire comme poussière ou vapeur. La flamme peut ne pas être évidente en jour.

TMD **Classe 3 Liquide inflammable. UN 1219**

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SECTION V Données sur la Réactivité

SS1070

Chimique Stabilité	oui	X	Si non, dans quelles condition?
	non		
Incompatibilité avec d'autres produits	oui	X	Peut réagir ou être incompatible avec des matières oxydantes.
	non		
Produits de decomposition dangereux	Ces produits sont des oxydes de carbone et oxydes d'azote.		
Conditions de Réactivité	Légèrement réactif à réactif avec les agents comburants, les acides.		

SECTION VI Propriétés Toxicologiques

Voies d'absorption	Ingestion. Contact cutané. Inhalation.
LMP	TWA: 400 ppm; 980 m/m^3
Toxicité pour les animaux	Toxicité aiguë de la vapeur (CL50): 16970 ppm (Rat).
Effets chroniques sur les humains	La substance est toxique pour le système reproducteur. Une exposition répétée ou prolongée à la substance peut entraîner des troubles à certains organes cibles. L'exposition répétée à un produit hautement toxique peut entraîner une détérioration générale de l'état de santé due à une accumulation dans un ou plusieurs des organes humains. Le système nerveux central, le foie et les reins sont des organes de cible.
Effets aigué sur les humains	Très dangereux en cas d'ingestion. Légèrement dangereux à dangereux en cas de contact avec la peau.

SECTION VII Mesures Préventives

Élimination des résidus	Consulter vos autorités locales ou régionales.
Entreposage	Les matières inflammables devraient être entreposées dans une armoire ou une pièce sécuritaire indépendante. Tenir à l'écart de la chaleur et de toute source d'ignition. Conserver le récipient bien fermé. Conserver dans un endroit frais et bien ventilé. Une pièce réfrigérée serait préférable pour les matières ayant un point d'éclair inférieur à 37.8°C (100°F).
Précautions	Éviter tout contact avec la peau et les yeux. Ne pas ingérer. Ne pas inhaler les gaz, fumées, vapeurs ou aérosols. Tenir à l'écart des matières incompatibles tel que les agents comburants.
Déversement ou fuite	Diluer avec de l'eau et absorber avec une moppe, ou absorber avec une substance inerte sèche et mettre dans un contenant de récupération approprié.
Vêtements de protection	Lunettes anti-éclaboussures. Blouse de laboratoire. Respirateur anti-vapeurs.

SECTION VIII Premiers Soins

Premier Soins Particuliers à Administrer

Ingestion: Consulter une médecin ou le centre de poison commande immédiatement. Induisez le vomissement seulement s'informé par le personnel médical approprié. Contact oculaire: Vérifer si la victime porte des verres de contact et dans ce cas lui les enlever. Rincer les yeux immèdiatement à l'eau courante pendant au moins 15 minutes en gardant les paupiéres ouvertes. Obtenir de l'aide médicale. Contact cutane: Laver doucement et entièrement la peau contaminée à l'eau courante avec un savon doux et non-abrasif. Inhalation: Sortir la victime à l'air frais. Si elle ne respire plus il faut lui donner de la respiration artificielle. Si la respiration est difficile, donnez l'oxygène. Assurez-vous que la victime se repose dans un endroit bien aéré. Obtenir immédiatement de l'aide médicale.

SECTION IX Renseignements sur la Préparation de la FS

# Rev.	5	Date	1 décembre, 2005	Vérifié par	Michael Raszeja

FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 792.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sudan IV

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sudan IV	85-83-6	$C_{24}H_{20}N_4O$	380.5	
Synonyms: Solvent red 24; Scarlet red; C.I. 26105				

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Wash with plenty of water (P302+P352). **If skin irritation occurs:** Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable solid.
When heated to decomposition, may emit toxic fumes.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Do not allow solid to become airborne. Ventilate area. Wipe up, place in sealed bag or container and dispose. Wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #9. Store with dyes, indicators and stains.
Keep container tightly closed. Store in a cool, dry place.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Will stain skin, clothing, and surfaces.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Reddish-brown powder. Odorless.
Soluble: Alcohol. Insoluble in water.

Melting point: 181-188 ^{o}C (decomposes)
Specific gravity: 1.192
Biological use: Used to stain oils and fats.

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant, stomach pains, vomiting, diarrhea
Chronic effects: Investigated as a tumorigen and mutagen.
Inconclusive results. IARC Group 3.
Target organs: Liver

ORL-RAT LD_{50}: N.A.
IHL-RAT LC_{50}: N.A.
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (201-635-8).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 800.00

Revision Date: March 21, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

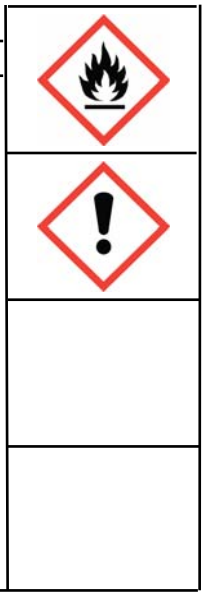
Sulfur

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms



SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Flammable solids (Category 1 & 2). Flammable solid (H228). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Hazard class: Skin corrosion/irritation (Category 2). Causes skin irritation (H315).

Hazard class: Acute toxicity, oral and inhalation (Category 5). May be harmful if swallowed or inhaled (H303 +H333).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sulfur	7704-34-9	S	32.06	

SECTION 4 — FIRST AID MEASURES

If exposed or concerned: Get medical advice or attention (P308+P313).
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
If on skin: Rinse cautiously with water for several minutes (P351).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Class IIIB combustible solid.
Flash point: 207 °C Flammable limits: Lower: 3.3% Autoignition Temperature: 232 °C
Fire and explosion risk in finely divided form. When heated to decomposition, may emit toxic fumes.
In case of fire: Use a class D fire extinguisher or dry sand for extinction (P370+P378).

NFPA CODE
H-2
F-1
R-0

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #10. Store with sulfur and phosphorus.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Yellow crystals or powder. Faint odor of rotten eggs.
Soluble: Slightly in alcohol and other organic solvents. Insoluble in water.

Boiling point: 444.6 ^{o}C
Melting point: 119 ^{o}C
Specific gravity: 2.06
Vapor density: 8.9

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with oxidizers and moisture.
Shelf life: Indefinite, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant.
Chronic effects: N.A.
Target organs: N.A.

ORL-RAT LD_{50}: 8437 mg/kg
IHL-RAT LC_{50}: N.A.
EYE-HUM: 8 ppm

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Aquatic toxicity: TLm96: 1000 ppm

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #26a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Sulfur. Hazard class: 9, Miscellaneous Hazardous. UN number: NA1350

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-722-6).

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 21, 2014

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Fisher Scientific

Material Safety Data Sheet

Sulfuric acid 90-98%

MSDS# 22350

Section 1 - Chemical Product and Company Identification

MSDS Name:	Sulfuric acid 90-98%
Catalog Numbers:	AC124640000, AC124640010, AC124640011, AC124640025, AC124640026, AC124645000 AC124645000, AC124645001, AC133610000, AC133610011, AC133610025, AC133610026 AC133610026, AC133610051, AC302070000, AC302070010, AC302070011, AC302070025 AC302070025, AC302070026, AC302070100, AC388270000, AC424520000, AC424520026 AC424520026, AC424525001, 13361-0010, 42452-0025, 42452-5000, A298-212, A298N119, A300-212, A300-225LB, A300-500, A300-500LC, A300-612GAL, A300-700LB, A300C-212, A300C-212002, A300C-212003, A300C-212LC, A300C212004, A300C212005, A300C212006, A300C212007, A300C212008, A300C212009, A300C212010, A300J-500, A300P-500, A300S-212, A300S-212EA, A300S-212LC, A300S-500, A300SI-212, A468-1, A468-2, A468-250, A468-500, A484-212, A510-212, A510-212LC, A510-500, A510SK-212, NC9008405, NC9825433, S71211SC, S71211SCMF, S79200, SA174-212, SA174-4, SA176-4, SA196-500
Synonyms:	Hydrogen sulfate; Oil of vitriol; Vitriol brown oil; Mattling acid; Battery acid; Sulphuric acid; Electrolyte acid; Dihydrogen sulfate; Spirit of sulfur; Chamber acid.

Company Identification:	Fisher Scientific One Reagent Lane Fair Lawn, NJ 07410
For information in the US, call:	201-796-7100
Emergency Number US:	201-796-7100
CHEMTREC Phone Number, US:	800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#:	7664-93-9
Chemical Name:	Sulfuric acid
%:	90-98
EINECS#:	231-639-5

Hazard Symbols: C

Risk Phrases: 35

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Danger! Hygroscopic (absorbs moisture from the air). May cause lung damage. Causes eye and skin burns. Causes digestive and respiratory tract burns. Corrosive to metal. May be fatal if mist inhaled. Concentrated sulfuric acid reacts violently with water and many other substances under certain conditions. Strong inorganic acid mists containing sulfuric acid may cause cancer. Target Organs: Lungs, teeth, eyes, skin.

Potential Health Effects

Eye:	Causes severe eye burns. May cause irreversible eye injury. May cause blindness. May cause permanent corneal opacification. The severity of injury depends on the concentration of the solution and the duration of exposure.
Skin:	Causes skin burns. The severity of injury depends on the concentration of the solution and the duration of exposure.

Ingestion:	May cause severe and permanent damage to the digestive tract. Causes gastrointestinal tract burns.
Inhalation:	May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema. Causes chemical burns to the respiratory tract. Inhalation may be fatal as a result of spasm, inflammation, edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Because its vapor pressure is negligible, it exists in the air only as a mist or spray. Exposure may impair lung function and cause mucostasis (reduced mucous clearance).
Chronic:	Prolonged or repeated skin contact may cause dermatitis. Prolonged or repeated inhalation may cause nosebleeds, nasal congestion, erosion of the teeth, perforation of the nasal septum, chest pain and bronchitis. Prolonged or repeated eye contact may cause conjunctivitis. Effects may be delayed. Workers chronically exposed to sulfuric acid mists may show various lesions of the skin, tracheobronchitis, stomatitis, conjunctivitis, or gastritis. Occupational exposure to strong inorganic acid mists containing sulfuric acid is carcinogenic to humans.

Section 4 - First Aid Measures

Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.
Skin:	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.
Ingestion:	If swallowed, do NOT induce vomiting. Get medical aid immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.
Inhalation:	POISON material. If inhaled, get medical aid immediately. Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Notes to Physician:	Monitor arterial blood gases, chest x-ray, and pulmonary function tests if respiratory tract irritation or respiratory depression is evident. Treat dermal irritation or burns with standard topical therapy. Effects may be delayed. Do NOT use sodium bicarbonate in an attempt to neutralize the acid.

Section 5 - Fire Fighting Measures

General Information:	As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Use water spray to keep fire-exposed containers cool. Substance is noncombustible. Contact with water can cause violent liberation of heat and splattering of the material. Contact with metals may evolve flammable hydrogen gas. Runoff from fire control or dilution water may cause pollution. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Strong dehydrating agent, which may cause ignition of finely divided materials on contact. Oxides of sulfur may be produced in fire.
Extinguishing Media:	Use extinguishing media most appropriate for the surrounding fire. Do NOT get water inside containers. If water is used, care should be taken, since it can generate heat and cause spattering if applied directly to sulfuric acid.
Autoignition Temperature:	Not available.
Flash Point:	Not applicable.
Explosion Limits: Lower:	Not available
Explosion Limits: Upper:	Not available
NFPA Rating:	; Special Hazard: -W-

Section 6 - Accidental Release Measures

General Information:	Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks:	Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Carefully scoop up and place into appropriate disposal container. Provide ventilation. Do not get water inside containers. Cover with dry earth, dry sand, or other non-combustible material followed with plastic sheet to minimize spreading and contact with water.

Section 7 - Handling and Storage

Handling:	Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Do not allow water to get into the container because of violent reaction. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Discard contaminated shoes. Use only with adequate ventilation. Do not breathe spray or mist. Do not

use with metal spatula or other metal items. Inform laundry personnel of contaminant's hazards.

Storage: Do not store near combustible materials. Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. Do not store near alkaline substances. Store protected from moisture. Ideally, sulfuric acid should be stored in isolation from all other chemicals in an approved acid or corrosives safety cabinet.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Sulfuric acid	0.2 mg/m3 (thoracic fraction)	1 mg/m3 TWA 15 mg/m3 IDLH	1 mg/m3 TWA

OSHA Vacated PELs: Sulfuric acid: 1 mg/m3 TWA

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use a corrosion-resistant ventilation system.

Exposure Limits

Personal Protective Equipment

Eyes: Wear chemical splash goggles and face shield.

Skin: Wear neoprene gloves, apron, and/or clothing. Viton gloves are recommended.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Color: oily - clear colorless to yellow

Odor: odorless

pH: 0.3 (1N solution)

Vapor Pressure: < 0.001 mm Hg @ 20 deg C

Vapor Density: 3.38 (air=1)

Evaporation Rate: Slower than ether.

Viscosity: 21 mPas @ 25 C

Boiling Point: 290 - 338 deg C

Freezing/Melting Point: 10 deg C (50.00°F)

Decomposition Temperature:

Solubility in water: Soluble with much heat

Specific Gravity/Density: 1.84

Molecular Formula: H_2SO_4

Molecular Weight: 98.07

Section 10 - Stability and Reactivity

Chemical Stability: Sulfuric acid reacts vigorously, violently or explosively with many organic and inorganic chemicals and with water.

Conditions to Avoid: Excess heat, exposure to moist air or water, Note: Use great caution in mixing with water due to heat evolution that causes explosive spattering. Always add the acid to water, never the reverse..

Incompatibilities with Other Materials: Metals, oxidizing agents, reducing agents, bases, acrylonitrile, chlorates, finely powdered metals, nitrates, perchlorates, permanganates, epichlorohydrin, aniline, carbides, fulminates, picrates, organic materials, flammable liquids.

Hazardous Decomposition: Oxides of sulfur.

Products

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#: CAS# 7664-93-9: WS5600000

LD50/LC50:
RTECS:
CAS# 7664-93-9: Draize test, rabbit, eye: 250 ug Severe;
Inhalation, mouse: LC50 = 320 mg/m3/2H;
Inhalation, mouse: LC50 = 320 mg/m3;
Inhalation, rat: LC50 = 510 mg/m3/2H;
Inhalation, rat: LC50 = 510 mg/m3;
Oral, rat: LD50 = 2140 mg/kg;
.

Carcinogenicity:
Other:
Sulfuric acid - ACGIH: A2 - Suspected Human Carcinogen (contained in strong inorganic acid mists)
California: carcinogen, initial date 3/14/03 (Strong inorganic acid mists containing sulfuric acid). NTP: Known carcinogen (Strong inorganic acid mists containing s). IARC: Group 1 carcinogen

Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity:
Fish: Bluegill/Sunfish: 49 mg/L; 48Hr; TLm (tap water @ 20C)
Fish: Bluegill/Sunfish: 24.5 ppm; 48Hr; TLm (fresh water)

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: SULFURIC ACID
Hazard Class: 8
UN Number: UN1830
Packing Group: II
Canada TDG
Shipping Name: SULFURIC ACID
Hazard Class: 8
UN Number: UN1830
Packing Group: II

USA RQ: CAS# 7664-93-9: 1000 lb final RQ; 454 kg final RQ

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: C

Risk Phrases:

R 35 Causes severe burns.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 30 Never add water to this product.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 7664-93-9: 2

Canada

CAS# 7664-93-9 is listed on Canada's DSL List

Canadian WHMIS Classifications: D2A, D1A, E

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 7664-93-9 is listed on Canada's Ingredient Disclosure List

US Federal

TSCA

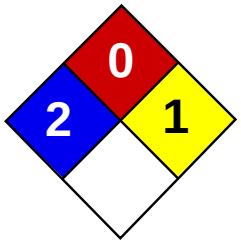
CAS# 7664-93-9 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 4/22/1999

Revision #16 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantibility or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.



Health	3
Fire	0
Reactivity	0
Personal Protection	

Material Safety Data Sheet
Sulfuric Acid, 1.0N MSDS

Section 1: Chemical Product and Company Identification

Product Name: Sulfuric Acid, 1.0N

Catalog Codes: SLS3571

CAS#: Mixture.

RTECS: Not applicable.

TSCA: TSCA 8(b) inventory: Sulfuric acid; Water

CI#: Not applicable.

Synonym: Sulfuric Acid 1.00 N Solution APHA

Chemical Name: Not applicable.

Chemical Formula: Not applicable.

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Sulfuric acid	7664-93-9	5
Water	7732-18-5	95

Toxicological Data on Ingredients: Sulfuric acid: ORAL (LD50): Acute: 2140 mg/kg [Rat.]. VAPOR (LC50): Acute: 510 mg/m 2 hours [Rat]. 320 mg/m 2 hours [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, . Hazardous in case of skin contact (corrosive, permeator), of eye contact (corrosive). Slightly hazardous in case of inhalation (lung sensitizer). Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Classified 1 (Proven for human.) by IARC, + (Proven.) by OSHA [Sulfuric acid]. Classified A2 (Suspected for human.) by ACGIH [Sulfuric acid]. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to lungs. Repeated or prolonged exposure

to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

Skin Contact:
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not applicable.

Explosion Hazards in Presence of Various Substances: Non-explosive in presence of open flames and sparks, of shocks.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards:
M i x t u r e s o f s u l f u r i c a c i d a n d a n y o f t h e f o l l o w i n g c a n e x p l o d e : p - n i t r o t o l u e n e , p e n t a s i l v e r trihydroxydiaminophosphate, perchlorates, alcohols with strong hydrogen peroxide, ammonium tetraperoxychromate, mercuric nitrite, potassium chlorate, potassium permanganate with potassium chloride, carbides, nitro compounds, nitrates, carbides, phosphorous, iodides, picratres, fulminats, dienes, alcohols (when heated) Nitramide decomposes explosively on contact with concentrated sulfuric acid. 1,3,5-Trinitrosohexahydro-1,3,5-triazine + sulfuric acid causes explosive decompositon. (Sulfuric acid)

Section 6: Accidental Release Measures

Small Spill:
Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: Neutralize the residue with a dilute solution of sodium carbonate.

Large Spill:
Corrosive liquid. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralize the residue with a dilute solution of sodium carbonate. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep locked up.. Keep container dry. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. May corrode metallic surfaces. Store in a metallic or coated fiberboard drum using a strong polyethylene inner package.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Boots.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
Sulfuric acid TWA: 1 STEL: 3 (mg/m3) [Australia] Inhalation TWA: 1 (mg/m3) from OSHA (PEL) [United States] Inhalation TWA: 1 STEL: 3 (mg/m3) from ACGIH (TLV) [United States] [1999] Inhalation TWA: 1 (mg/m3) from NIOSH [United States] Inhalation TWA: 1 (mg/m3) [United Kingdom (UK)]Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Odorless.

Taste: Not available.

Molecular Weight: Not applicable.

Color: Clear Colorless.

pH (1% soln/water): 2 [Acidic.]

Boiling Point: The lowest known value is 100°C (212°F) (Water). Weighted average: 109.31°C (228.8°F)

Melting Point: May start to solidify at 10.36°C (50.6°F) based on data for: Sulfuric acid.

Critical Temperature: Not available.

Specific Gravity: Weighted average: 1.02 (Water = 1)

Vapor Pressure: The highest known value is 2.3 kPa (@ 20°C) (Water).

Vapor Density: The highest known value is 3.4 (Air = 1) (Sulfuric acid). Weighted average: 0.76 (Air = 1)

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water.

Solubility: Easily soluble in cold water, hot water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials

Incompatibility with various substances:
Slightly reactive to reactive with oxidizing agents, reducing agents, combustible materials, organic materials, metals, acids, alkalis.

Corrosivity:
Extremely corrosive in presence of aluminum, of stainless steel(304). Corrosive in presence of stainless steel(316). Non-corrosive in presence of glass.

Special Remarks on Reactivity:
Hygroscopic. Strong oxidizer. Reacts violently with water and alcohol especially when water is added to the product. ncompatible (can react explosively or dangerously) with the following: ACETIC ACID, ACRYLIC ACID, AMMONIUM HYDROXIDE, CRESOL, CUMENE, DICHLOROETHYL ETHER, ETHYLENE CYANOHYDRIN, ETHYLENEIMINE, NITRIC ACID, 2-NITROPROPANE, PROPYLENE OXIDE, SULFOLANE, VINYLIDENE CHLORIDE, DIETHYLENE GLYCOL MONOMETHYL ETHER, ETHYL ACETATE, ETHYLENE CYANOHYDRIN, ETHYLENE GLYCOL MONOETHYL ETHER ACETATE, GLYOXAL, METHYL ETHYL KETONE, dehydrating agents, organic materials, moisture (water), Acetic anhydride, Acetone, cyanohydrin, Acetone+nitric acid, Acetone + potassium dichromate, Acetonitrile, Acrolein, Acrylonitrile, Acrylonitrile +water, Alcohols + hydrogen peroxide, ally compounds such as Allyl alcohol, and Allyl Chloride, 2-Aminoethanol, Ammonium hydroxide, Ammonium triperchromate, Aniline, Bromate + metals, Bromine pentafluoride, n-Butyraldehyde, Carbides, Cesium acetylene carbide, Chlorates, Cyclopentanone oxime, chlorinates, Chlorates + metals, Chlorine trifluoride, Chlorosulfonic acid, 2-cyano-4-nitrobenzenediazonium hydrogen sulfate, Cuprous nitride, p-chloronitrobenzene, 1,5-Dinitronaphthlene + sulfur, Diisobutylene, p-dimethylaminobenzaldehyde, 1,3-Diazidobenzene, Dimethylbenzylcarbinol + hydrogen peroxide, Epichlorohydrin, Ethyl alcohol + hydrogen peroxide, Ethylene diamine, Ethylene glycol and other glycols, , Ethylenimine, Fulminates, hydrogen peroxide, Hydrochloric acid, Hydrofluoric acid, Iodine heptafluoride, Indane + nitric acid, Iron, Isoprene, Lithium silicide, Mercuric nitride, Mesityl oxide, Mercury nitride, Metals (powdered), Nitromethane, Nitric acid + glycerides, p-Nitrotoluene, Pentasilver trihydroxydiaminophosphate, Perchlorates, Perchloric acid, Permanganates + benzene, 1-Phenyl-2-methylpropyl alcohol + hydrogen peroxide, Phosphorus, Phosphorus isocyanate, Picrates, Potassium tert-butoxide, Potassium chlorate, Potassium Permanganate and other permanganates, halogens, amines, Potassium Permanganate + Potassium chloride, Potassium Permanganate + water, Propiolactone (beta)-, Pyridine, Rubidium aceteylene carbide, Silver permanganate, Sodium, Sodium carbonate, sodium hydroxide, Steel, styrene monomer, toluene + nitric acid, Vinyl acetate, Thalium (I) azidodithiocarbonate, Zinc chlorate, Zinc Iodide, azides, carbonates, cyanides, sulfides, sulfites, alkali hydrides, carboxylic acid anhydrides, nitriles, olefinic organics, aqueous acids, cyclopentadiene, Hydrogen gas is generated by the action of the acid on most metals (i.e. lead, copper, tin, zinc, aluminum, etc.) (Sulfuric acid)

Special Remarks on Corrosivity:
No corrosivity information for brass and copper. Moderate corrosive effect on bronze.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 43673 mg/kg (Rat.) (Calculated value for the mixture).

Chronic Effects on Humans:
CARCINOGENIC EFFECTS: Classified 1 (Proven for human.) by IARC, + (Proven.) by OSHA [Sulfuric acid]. Classified A2 (Suspected for human.) by ACGIH [Sulfuric acid]. Causes damage to the following organs: lungs.

Other Toxic Effects on Humans:
Very hazardous in case of skin contact (irritant), of ingestion, . Hazardous in case of skin contact (corrosive, permeator), of eye contact (corrosive). Slightly hazardous in case of inhalation (lung sensitizer, lung corrosive).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:
Mutagenicity: Cytogenetic Analysis: Hamster, ovary = 4mmol/L Reproductive effects: May cause adverse reproductive effects based on animal data. Developmental abnormalities (musculoskeletal) in rabbits at a dose of 20 mg/m3 for 7 hrs.(RTECS) Teratogenecity: neither embryotoxic, fetoxic, nor teratogenetic in mice or rabbits at inhaled doses producing some maternal toxicity (Sulfuric acid)

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: Causes severe skin irritation and burns. Continued contact can cause tissue necrosis. Eye: Causes severe eye irritation and burns. May cause irreversible eye injury. Ingestion: Harmful if swallowed. May cause permanent damage to the digestive tract. Causes gastrointestial tract burns. May cause perforation of the stomach, GI bleeding, edema of the glottis, necrosis and scarring, and sudden circulatory collapse(similar to acute inhalation). It may also cause systemic toxicity with acidosis. Inhalation: May cause severe irritation of the respiratory tract and mucous membranes with sore throat, coughing, shortness of breath, and delayed lung edema. Causes chemical burns to the repiratory tract. Inhalation may be fatal as a result of spasm, inflammation, edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Cause corrosive action on mucous membranes. May affect cardiovascular system (hypotension, depressed cardiac output, bradycardia). Circulatory collapse with clammy skin, weak and rapid pulse, shallow respiration, and scanty urine may follow. Circulatory shock is often the immediate cause of death. May also affect teeth(changes in teeth and supporting structures - erosion, discoloration). Chronic Potential Health Effects: Inhalation: Prolonged or repeated inhalation may affect behavior (muscle contraction or spasticity), urinary system (kidney damage), and cardiovascular system, heart (ischemic heart leisons), and respiratory system/lungs(pulmonary edema, lung damage), teeth (dental discoloration, erosion). Skin: Prolonged or repeated skin contact may cause dermatitis, an allergic skin reaction. (Sulfuric acid)

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Class 8: Corrosive material

Identification: : Sulfuric acid, solution (Sulfuric acid) UNNA: 2796 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
Illinois toxic substances disclosure to employee act: Sulfuric acid New York release reporting list: Sulfuric acid Rhode Island RTK hazardous substances: Sulfuric acid Pennsylvania RTK: Sulfuric acid Minnesota: Sulfuric acid Massachusetts RTK: Sulfuric acid New Jersey: Sulfuric acid TSCA 8(b) inventory: Sulfuric acid; Water SARA 302/304/311/312 extremely hazardous substances: Sulfuric acid SARA 313 toxic chemical notification and release reporting: Sulfuric acid 5% CERCLA: Hazardous substances.: Sulfuric acid: 1000 lbs. (453.6 kg);

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):
CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS E: Corrosive liquid.

DSCL (EEC):
R34- Causes burns. S23- Do not breathe gas/fumes/vapour/spray [***] S24/25- Avoid contact with skin and eyes. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28- After contact with skin, wash immediately with plenty of water. S37/39- Wear suitable gloves and eye/face protection. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

HMIS (U.S.A.):

Health Hazard: 3

Fire Hazard: 0

Reactivity: 0

Personal Protection:

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 0

Reactivity: 1

Specific hazard:

Protective Equipment:
Gloves. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Face shield.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/10/2005 12:14 PM

Last Updated: 06/09/2012 12:00 PM

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 801.04

Revision Date: March 25, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sulfuric Acid Solution, Less than 1M

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **WARNING**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

Industrial exposure to sulfuric acid vapors and mists is listed as a known human carcinogen by IARC (IARC-1).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sulfuric acid	7664-93-9	H_2SO_4	98.08	0.3-5.3%
Water	7732-18-5	H_2O	18.00	94.7-99.7%

SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). **If eye irritation persists:** Get medical advice or attention (P337+P313).
If on skin: Wash with plenty of water (P302+P352). **If skin irritation occurs:** Get medical advice or attention (P332+P313).
If swallowed: Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Spilled sulfuric acid is very slippery. Contain spill with sand or other inert absorbent material, neutralize with sodium bicarbonate or calcium hydroxide and deposit in sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #9. Store with acids, except nitric acid.
Store in a dedicated acid cabinet and away from any source of water; if an acid cabinet is not available, store in Flinn Saf-Cube™.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).
Exposure guidelines: (as sulfuric acid) PEL 1 mg/m^3 (OSHA); TLV 0.2 mg/m^3 (thoracic fraction) (ACGIH); IDLH 15 mg/m^3 (OSHA)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Clear, colorless liquid. Slight sulfurous odor.

pH: <1
pH 0.01M ~ 2

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong bases, organic materials, finely powdered metals, peroxides, carbonates, chlorates, nitrates, and reducing agents.
Shelf life: Good, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Skin and eye irritant.
Chronic effects: Dental erosion.
Target organs: Eyes, skin, respiratory system.

ORL-RAT LD_{50}: 2140 mg/kg as sulfuric acid
IHL-RAT LC_{50}: 510 mg/m^3/2 hour as sulfuric acid
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Fish: Bluegill/Sunfish: 49 mg/L; 48Hr; TLm (tap water @ 20°C)

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #24b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Sulfuric Acid Solution. Hazard class: 8, Corrosive. UN number: UN2796.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-639-5). RCRA code D002, D003.

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 25, 2014

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FLINN SCIENTIFIC, INC.
Safety Data Sheet (SDS)

SDS #: 801.02

Revision Date: March 25, 2014

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sulfuric Acid Solution, 1M - 6M

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Signal Word **DANGER**

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Skin corrosion or irritation (Category 1). Causes severe skin burns and eye damage (H314). Do not breathe mist, vapors or spray (P260).

Hazard class: Acute toxicity, inhalation (Category 5). May be harmful if inhaled (H333).

Hazard class: Hazardous to the aquatic environment, acute toxicity (Category 3). Harmful to aquatic life (H402).

Considerable heat generated when diluted with water.

Industrial exposure to sulfuric acid vapors and mists is listed as a known human carcinogen by IARC (IARC-1).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Sulfuric acid	7664-93-9	H_2SO_4	98.08	5.3-32%
Water	7732-18-5	H_2O	18.00	68-94.7%

SECTION 4 — FIRST AID MEASURES

Immediately call a POISON CENTER or physician (P310).
If inhaled: Call a POISON CENTER or physician if you feel unwell (P304+P312). **If in eyes:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338).
If on skin (or hair): Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353). Wash contaminated clothing before reuse (P363). **If swallowed:** Rinse mouth. Do NOT induce vomiting (P301+P330+P331).

SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible solution.
In case of fire: Use a tri-class dry chemical fire extinguisher.

NFPA CODE
None established

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area. Spilled sulfuric acid is very slippery. Contain spill with sand or other inert absorbent material, neutralize with sodium bicarbonate or calcium hydroxide and deposit in sealed bag or container. See Sections 8 and 13 for further information.

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SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Inorganic #9. Store with acids, except nitric acid.
Store in a dedicated acid cabinet and away from any source of water; if an acid cabinet is not available, store in Flinn Saf-Cube™.
Use only in a hood or well-ventilated area (P271).

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or well-ventilated area (P271).
Exposure guidelines: (as sulfuric acid) PEL 1 mg/m^3 (OSHA); TLV 0.2 mg/m^3 (thoracic fraction) (ACGIH); IDLH 15 mg/m^3 (OSHA)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Clear, colorless liquid. Sulfurous odor.
Soluble: Miscible with water, evolves heat.

pH: <1

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with strong bases, organic materials, finely powdered metals, peroxides, carbonates, chlorates, nitrates, and reducing agents. Reacts violently with water. Always add acid to water, never the reverse.
Shelf life: Good, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Acute effects: Corrosive to all body tissues, severe respiratory tract irritant.
Chronic effects: Lung, nose and throat damage, cancer, tooth erosion.
Target organs: Eyes, skin, respiratory system, and teeth.

ORL-RAT LD_{50}: 2140 mg/kg as sulfuric acid
IHL-RAT LC_{50}: 510 mg/m^3/2 hour as sulfuric acid
SKN-RBT LD_{50}: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

SECTION 12 — ECOLOGICAL INFORMATION

Fish: Bluegill/Sunfish: 49 mg/L; 48Hr; TLm (tap water @ 20°C)

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #24b is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Sulfuric Acid Solution. Hazard class: 8, Corrosive. UN number: UN2796.

N/A = Not applicable

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-639-5). RCRA code D002, D003.

SECTION 16 — OTHER INFORMATION

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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 25, 2014

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FLINN SCIENTIFIC INC.

"Your Safer Source for Science Supplies"

Material Safety Data Sheet (MSDS)

MSDS #: 801.00
Revision Date: May 22, 2001

Section 1 — Chemical Product and Company Identification

Sulfuric Acid

Flinn Scientific, Inc. P.O. Box 219 Batavia, IL 60510 (800) 452-1261

CHEMTREC Emergency Phone Number: (800) 424-9300

Section 2 — Composition, Information on Ingredients

Sulfuric Acid (7664, 93-9) 48-96%, and water (7732-18-5) 4-52%
18M, 12.5M, 9M

CAS#: 7664-93-9

Section 3 — Hazards Identification

Colorless, dense, oily liquid. Sulfurous odor.
Highly toxic by ingestion and inhalation. Severely corrosive to eye, skin, and all other body tissues.
Avoid all body tissue contact.
Very considerable heat generated when diluted with water.

FLINN AT-A-GLANCE
Health-3
Flammability-0
Reactivity-3
Exposure-3
Storage-3

0 is low hazard, 3 is high hazard

Section 4 — First Aid Measures

Call a physician, seek medical attention for further treatment, observation and support after first aid.
Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.
Eye: Immediately flush with fresh water for 15 minutes.
External: Wash continuously with fresh water for 15 minutes.
Internal: Give 1 to 2 cups of water or milk, followed by a gastric antacid, such as milk of magnesia. Do not induce vomiting. Call a physician or poison control at once.

Section 5 — Fire Fighting Measures

Non flammable liquid.
When heated to decomposition, emits toxic fumes of SOx.
Fire Fighting Instructions: Use triclass, dry chemical fire extinguisher. Firefighters should wear PPE and SCBA with full facepiece operated in positive pressure mode.

NFPA CODE
H-3
F-0
R-2
No water

Section 6 — Accidental Release Measures

Restrict unprotected personnel from area. Remove all ignition sources and ventilate area. Contain spill with sand and absorbent material, neutralize with sodium bicarbonate or calcium hydroxide and deposit in sealed bag or container. See Sections 8 and 13 for further information.

Section 7 — Handling and Storage

Flinn Suggested Chemical Storage Pattern: Inorganic #9. Store with acids.
Store in a dedicated acid cabinet and away from any source of water; if an acid cabinet is not available, store in Flinn Saf-Cube.
Use and dispense in a hood.

Section 8 — Exposure Controls , Personal Protection

Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, chemical-resistant gloves and chemical-resistant apron.Use ventilation to keep airborne concentrations below exposure limits. Always wear a NIOSH-approved respirator with proper cartridges or a positive pressure, air-supplied respirator when handling this material in emergency situations (spill or fire).
Exposure guidelines: TWA 1 mg/m3, STEL 3 mg/m3 (OSHA, ACGIH)

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Section 9 — Physical and Chemical Properties

Colorless, dense, oily liquid. Sulfurous odor.
Solubility: Miscible with water evolving much heat.
Formula: H2SO4
Formula Weight: 98.08
Concentration: 9-18 Molar

Specific Gravity: 1.84
Melting Point: 10.4 C
Boiling Point: 290 C

Section 10 — Stability and Reactivity

Avoid contact with strong bases, reacts violently with water. Always add acid to water, never the reverse.
Shelf Life: Good, if stored safely.

Section 11 — Toxicological Information

Acute effects: Severely corrosive
Chronic effects: N.A.
Target organs: Eyes, skin

ORL-RAT LD50: 2140 mg/kg
IHL-RAT LC50: 510 mg/m3/2H
SKN-RBT LD50: N.A.

N.A. = Not available, not all health aspects of this substance have been fully investigated.

Section 12 — Ecological Information

Data not yet available.

Section 13 — Disposal Considerations

Please consult with state and local regulations.
Flinn Suggested Disposal Method #24b is one option.

Section 14 — Transport Information

Shipping Name: Sulfuric Acid
Hazard Class: 8, Corrosive
UN Number: UN1830

N/A = Not applicable

Section 15 — Regulatory Information

TSCA-listed, EINECS-listed (231-639-5), RCRA code D002, D003.

Section 16 — Other Information

Consult your copy of the Flinn Scientific Catalog/Reference Manual for additional information about laboratory chemicals. This Material Safety Data Sheet (MSDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. Flinn Scientific Inc. assumes no legal responsibility for use or reliance upon this data.

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"Your Safer Source for Science Supplies"

Flinn MSDS Prevent Chemical Accidents

flinn@flinnsci.com www.flinnsci.com
P.O. Box 219 Batavia IL 60510
(800) 452-1261 Fax (866) 452-1436

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GRAYMILLS CORPORATION

MATERIAL SAFETY DATA SHEET

NFPA HAZARD RATING	
HEALTH	1
FLAMMABILITY	2
REACTIVITY	0

Conforms to OSHA form No. 1218-0072
Complies with OSHA hazard communication standard, 29CFR1910.1200

IDENTITY: **Super Agitene**
CHEMICAL FAMILY: **Cleaning compound (Combustible Liquid)**

SECTION I

MANUFACTURERS NAME: Graymills Corporation
ADDRESS: 3705 North Lincoln Ave.
Chicago, Illinois 60613

EMERGENCY #: 1-800-424-9300 (CHEMTREC)
TELEPHONE #: 1-773-248-6825
DATE PREPARED: May 15, 2005
PREPARERS SIGNATURE: R. C. Patel

SECTION II - INGREDIENTS/IDENTITY INFORMATION

SPECIFIC CHEMICAL IDENTITY/COMMON NAME(S):	OSHA PEL	ACGIH TLV	CAS# (*see note)	CONCENTRATION RANGE %
Aliphatic Petroleum Distillate	100 ppm	100 ppm	64742-88-7	>97%
DPM (Dipropylene Glycol Methyl Ether)	100 ppm	100 ppm	34590-94-8	<1%

SECTION III- PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING RANGE (FAHRENHEIT): 318°- 388°F/159°-198°C
VAPOR PRESSURE (mm Hg @ 68°F/20°C): 1.5
VOC CONTENT: 780 g/l

SPECIFIC GRAVITY (WATER=1): .78
MELTING POINT: N/A
EVAPORATION RATE (n-Butyl acetate=1): .15
pH: N/A

SOLUBILITY IN WATER: Insoluble
APPEARANCE & ODOR: Clear green liquid, mild mineral spirits odor.

SECTION IV- FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED): 105°F/40.5°C (Tag CC ASTM D56)

FLAMMABLE LIMITS:
LEL: 0.6%
UEL: 7.0%

EXTINGUISHING MEDIA: CO_2 foam, dry chemicals, water spray (fog)

SPECIAL FIRE FIGHTING PROCEDURES: Cool sealed drums with water to lessen chance of rupture. Wear self-contained breathing gear. Minimize breathing of gases, vapors or decomposition products.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Combustible liquid, drums could fracture if heated. Auto ignition temperature approximately 450°F (232°C).

SECTION V- REACTIVITY DATA

STABILITY: Unstable ☐ Stable ☑

CONDITIONS TO AVOID: Keep away from heat, sparks, and open flame.

INCOMPATIBILITY (MATERIAL TO AVOID): Acids, strong oxidizers such as liquid chlorine, concentrated oxygen, sodium hypochlorite, and calcium hypochlorite.

HAZARDOUS DECOMPOSITION OF BYPRODUCTS: Carbon dioxide, carbon monoxide, fumes, smoke, and aldehydes upon incomplete combustion.

HAZARDOUS POLYMERIZATION: May Occur ☐ Will not Occur ☑

CONDITIONS TO AVOID: None

**CAS # for component could vary from different suppliers due to different manufacturing processes. Specs per Shell MSDS 7.591-4*

SECTION VI- HEALTH HAZARD DATA

ROUTE(S) OF ENTRY: INHALATION ✓ SKIN ✓ INGESTION ✓

HEALTH HAZARDS (ACUTE & CHRONIC): Skin irritation
Dermal: LD_{50} > 4 ml/kg - Rat
Oral: LD_{50} > 4000 mg/kg - rat
Inhalation: LC_{50} > 3670 ppm/8 Hr. - Rat

CARCINOGENICITY:	NTP	IARC MONOGRAPHS	OSHA REGULATED
	NO	NO	NO

SIGNS & SYMPTOMS OF EXPOSURE: Skin or eye irritation, dizziness, or headache.

MEDICAL CONDITIONING GENERALLY AGGRAVATED BY EXPOSURE: Skin or respiratory allergies.

EMERGENCY & FIRST AID PROCEDURES:

Eye Contact: High vapor concentration may be irritating. If liquid gets into eye, irrigate eye with water for 15 minutes with lid open. See doctor.

Skin contact: Prolonged & repeated exposure may dry the skin. If clothing gets wet, remove and wash exposed area with water. Apply skin lotion or lanolin cream. If irritation results, see doctor.

Inhalation: Vapors may result in irritation to nose, throat & respiratory tract. High vapor concentration can cause headache & dizziness, and result in central nervous system depression. Remove to fresh air. Use oxygen or artificial respiration if required.

Ingestion: Do not induce vomiting. Call Doctor. If more than 2.0 ml/kg is ingested and vomiting has not occurred, then nemesis could be induced with doctors supervision. If vomiting occurs, keep head below hip to prevent aspiration of liquid into lungs.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Use absorbent material or sand. Shovel into waste container. Dispose of properly.

WASTE DISPOSAL METHOD: Reclaim by distillation or have disposal performed by a licensed waste hauler.

PRECAUTIONS TO BE TAKEN IN HANDLING & STORING: Store in cool area away from heat or open flames. All precautions apply to empty container.

OTHER PRECAUTIONS: Not biodegradable. Sufficient ventilation in volume and pattern to keep work area concentration below applicable safety levels.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION (SPECIFY TYPE): None

VENTILATION

LOCAL EXHAUST: None. Sufficient ventilation in volume and pattern to keep work area concentration below applicable safety levels.

SPECIAL: None MECHANICAL (GENERAL): Well ventilated room

PROTECTIVE GLOVES: Nitrile

EYE PROTECTION: Chemical splash goggles

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: For constant use, Nitrile gloves and solvent resistant apron are recommended. Wear goggles as appropriate.

WORK/HYGIENIC PRACTICES: Use skin lotion or cream if gloves are not worn.

SECTION IX - TRANSPORTATION INFORMATION

DOMESTIC (DOT)

GROUND: Combustible liquid, N.O.S., not regulated under 49 CFR

AIR: Use international regulations

INTERNATIONAL (ICAO/IATA)

Petroleum distillates, N.O.S., Class 3, UN1268, Packaging Group III

THE DATA PRESENTED IS TRUE AND CORRECT TO THE BEST OF OUR KNOWLEDGE AND BELIEF. NEITHER SELLER NOR PREPARER MAKES ANY WARRANTIES, EXPRESSED OR IMPLIED, CONCERNINGTHE INFORMATION PRESENTED, MERCHANTABILITY OR FITNESS OF PURPOSE.

SAFETY DATA SHEET

1. Identification

Product identifier **SUPER HIL-TONE**

Other means of identification

SDS number 966N-50A

Product code HIL00215

Recommended use Floor Cleaner

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Manufacturer

Company name HILLYARD INDUSTRIES

Address 302 North Fourth St.
St. Joseph, MO 64501

Contact person Regulatory Affairs

Telephone number (816) 233-1321 (Ext. 8285)

Fax (816) 383-8485

E-mail regulatoryaffairs@hillyard.com

Emergency telephone # (800) 424-9300
(Only in the event of chemical emergency involving a spill, leak, fire, exposure, or accident involving chemicals.)

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Specific target organ toxicity, single exposure Category 3 respiratory tract irritation

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Signal word Warning

Hazard statement May cause respiratory irritation.

Precautionary statement

Prevention Avoid breathing mist or vapor. Use only outdoors or in a well-ventilated area.

Response If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.

Storage Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law in compliance with applicable federal, state and local requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information Use only with adequate ventilation. Do not breathe vapors or spray mist. Ensure fresh air entry during application and drying. Do not spray fine fog mist into sparks or open flame - vapors may ignite. Close container after each use. Avoid prolonged contact with eyes, skin and clothing. Wash thoroughly after handling. Do not take internally. Repeated or prolonged skin contact may produce skin irritation. Do not spray fine fog mist into sparks or open flame - vapors may ignite.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Solvent Refined Heavy Paraffinic Petroleum Oil		64741-88-4	70 - < 80
Solvent Refined Light Paraffinic Petroleum Oil		64741-89-5	20 - < 30
Mineral Spirits		64742-88-7	1 - < 3
Other components below reportable levels			< 0.2

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed May cause respiratory irritation.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO_2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Avoid breathing mist or vapor. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Chemical splash goggles where there is a potential for eye contact.
Skin protection	
Hand protection	Not normally needed. For prolonged or repeated skin contact use suitable protective gloves.
Other	Normal work clothing (long sleeved shirts and long pants) is recommended.
Respiratory protection	Not normally required with adequate ventilation. If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	Translucent Colorless to slight yellow liquid
Physical state	Liquid.
Form	Liquid.
Color	Light yellow.
Odor	Pleasant odor
Odor threshold	Not available
pH	Not available
Melting point/freezing point	Not applicable / Not available
Initial boiling point and boiling range	305 °F (151.67 °C)
Flash point	225.0 °F (107.2 °C) Pensky-Martens Closed Cup
Evaporation rate	< 1 Ethyl ether = 1
Flammability (solid, gas)	Not established.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	6.6 mm Hg
Vapor density	4.7 AIR=1
Relative density	0.857 at 77°C
Solubility(ies)	
Solubility (water)	Negligible
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	469.4 °F (243 °C)
Decomposition temperature	Not available
Viscosity	Not available

Other information

Density	7.14 lbs/gal
Percent volatile	5 - 7 %
VOC (Weight %)	< 3 %

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	May cause respiratory irritation.

Information on toxicological effects

Acute toxicity	May cause respiratory irritation.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	May cause respiratory irritation.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not contaminate ponds, waterways or ditches with chemical or used container. Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Triple rinse (or equivalent). Then offer clean, dry container for recycling or reconditioning.

14. Transport information

DOT

Not regulated as dangerous goods.

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Solvent Refined Light Paraffinic Petroleum Oil (CAS 64741-89-5)

US. New Jersey Worker and Community Right-to-Know Act

Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed.

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	01-27-2015
Version #	01
HMIS® ratings	Health: 2 Flammability: 0 Physical hazard: 0
Disclaimer	No representations or warranties, either express or implied, of merchantability, fitness for a particular purpose, or of any nature are made with respect to the product(s) or information contained in this material safety data sheet. The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate. The buyer or user assumes all risks associated with the use, misuse or disposal of this product. The buyer or user is responsible to comply with all federal, state or local regulations concerning the use, misuse or disposal of these products.

MATERIAL SAFETY DATA SHEET
(Similar to OSHA FORM 174)

N.A. = Not Applicable
Not Est. = Not Established
Prop. = Proprietary

Section 1 - Manufacturer / Distributor Information

Product Name SUPER NAC Concentrated All-Purpose Cleaner **Product #** 0901
Supplier's Name National Chemical Laboratories of PA, Inc.
Supplier's Address 401 N. 10th Street - Philadelphia, PA 19123 **Emergency Phone No** 1 (800) 255-3924
HMIS Hazard Code **Health** 1 **Flammability** 0 **Phys Hazard** 0 **Chemical Name** Detergent
Chemical Family Blended Detergent **Formula** N.A. Blended Product
DOT Shipping Name N/A **Hazard Class** N/A
PKG Group
DOT ID # N/A

Section 2 - Hazardous Ingredients

CHEMICAL NAME	CAS NUMBER	% Concentration Range	Exposure Limit ACGIH	Exposure Limit TLV/PEL
Dodecyl Benzene Sulfonic Acid Sodium Salt	25155-30-0	PROP.		Not Est.
Polyethylene Mono (Nonylphenyl) Ether Glycols	9016-45-9	PROP.		Not Est.

Section 3 - Physical Data

Boiling Point (F) 212 **Specific Gravity** 1.03 ± 0.01
Vapor Pressure = To Water **Evaporation Rate** = To Water
Vapor Density = To Water **pH**
Solubility in Wate Complete **pH(1)**
Appearance Clear Viscous Pink Liquid **pH(2)**
Odor Citrus **VOC Content**

Section 4 - Fire and Explosion Data

Flammable Limits N/A **LEL** **UEL**

Fire Fighting Equipment
Extinguishing Media
Unusual Fire Explosion Hazards None
Hazardous Combustion Products

Section 5 - Health Hazard Data

Routes of Entry **Inhalation** ☑ **Skin** ☑ **Ingestion** ☑

Effects of Over exposure May cause skin and eye irritation. May be harmful if swallowed. Inhalation of spray or mist may cause respiratory irritation.

Emergency and First Aid Procedures For Eyes: Rinse thoroughly with water for at least fifteen minutes. If irritation persists seek medical attention. For Skin: Thoroughly wash with water. If irritation persists seek medical attention. If ingested: Do not induce vomiting. Give milk, egg white, gelatin, or if none of these are available give large quantities of water. Seek medical attention. Never give anything by mouth to an unconscious person. If inhalation causes irritation, move to fresh air.

Conditions Aggravated by Exposure None **Threshold Limit Value** Not Est.
Listed None
Statement regarding Green Seal, Inc. Certification

Section 6 - Reactivity Data

Stability Stable
Conditions to Avoid None
Incompatibility Avoid contact with strong acids and oxidizers
Flash Point (F) None to boiling (TOC)
Hazardous Polymerization Will not occur.
Hazardous Decomposition Products Carbon oxides

Section 7 - Spill and Leak Procedures

Spill Steps Recontainerize by mopping, wet vacuum, or using a suitable absorbent. Rinse remaining material to drains. Be cautious of slippery floors.

Waste Disposal Method Follow local, state, and federal regulations.

Section 8 - Special Protection Information

Respiratory Protection	Not required
Ventilation	General mechanical recommended.
Protective Gloves	Not required for casual contact. For prolonged contact latex, nitrile or neoprene gloves recommended.
Eye Protection	Safety glasses with side shields.
Other Protective Equipment	Not required
Work /Hygenic Practices	

Section 9 - Special Precautions

Precautions Handling Storage	Store in sealed container in cool dry location, in a well ventilated area.
Other Precautions	Remove and wash all contaminated clothing before reuse. Keep out of reach of children. For Commercial and Industrial Use Only.
CA Proposition 65 Statement	

The information contained in this MSDS was obtained from current and reliable sources, however the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions or handling, storage and disposal of this product are beyond the control of this company, it is not responsible for loss, injury and expense arising out of the product's improper use. No warranty, expressed or inferred, regarding the product described in this MSDS shall be created or inferred by any statement in this MSDS. Various government agencies may have specific regulations regarding the transportation, handling, storage, use or disposal of this product which may be covered by this MSDS. The user is responsible for full compliance

Date Prepared 8/1/2013 **Prepared By** G.C.

MATERIAL SAFETY DATA SHEET

1.CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product: **Super S DOT 3 Brake Fluid**
Manufacturer: Smitty's Supply Inc.
63399 Hwy 51 North
Roseland, LA 70456

Emergency Telephone Numbers:
800-256-7575
985-748-6572

2. COMPOSITION/INFORMATION & PRECAUTIONARY DATA

A. Principal Component:

	weight%	Cas No.
DIETHYLENE GLYCOL	< 10%	111-46-6
* DIETHYLENE GLYCOL MONOBUTYL ETHER	15-35%	112-34-5
* TRIETHYLENE GLYCOL MONOBUTYL ETHER	15-25%	143-22-6
TRIPROPYLENE GLYCOL	15-20%	24800-44-0
POLYPROPYLENE GLYCOL	5-10%	25322-69-4
* DIETHYLENE GLYCOL MONOPROPYL ETHER	5-10%	6881-94-3

See SECTION VI for information on Exposure Limits.

*** Chemicals subject to reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.**

B. Precautionary Labels and Statements

Caution: Keep away from heat and strong oxidizing agents.
Since emptied containers contain product residue, follow label warnings even after container is emptied.

3. PHYSICAL DATA

APPEARANCE: CLEAR, AMBER WITH SLIGHT ETHERIC ODOR
BOILING POINT: 460-470° F
SPECIFIC GRAVITY: 1.023-1.035
VAPOR PRESSURE: Less than 0.1 @ 20° C
SOLUBILITY in WATER: Complete

4. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 270° F TOC
FLAMMABLE LIMITS: LEL NOT DETERMINED
UEL NOT DETERMINED
EXTINGUISHING MEDIA: Regular foam, dry chemical, carbon dioxide, or water fog.
FIRE FIGHTING INSTRUCTIONS: Wear self-contained breathing apparatus with full face piece and protective clothing.
UNUSUAL FIRE AND EXPLOSION HAZARDS: NOT KNOWN

5. REACTIVITY DATA

STABILITY: Stable, however, avoid contact with strong oxidizing agents and temperatures in excess of 300° C.
INCOMPATIBILTIY: None known.
HAZARDOUS DECOMPOSITION PRODUCTS: Combustion will produce carbon dioxide and probably carbon monoxide.
HAZARDOUS POLYMERIZATION: Will not occur

HEALTH

A. EXPOSURE LIMITS

Threshold Limit Values (TLV): Not Established
OSHA Permissible Exposure Limit (PEL): Not Established

B. EXPOSURE EFFECTS

Inhalation: Low hazard but could cause coughing
Eyes: Low hazard for usual handling. Contact with eyes could cause irritation.
Skin: Low hazard with usual handling. Prolonged contact with skin could result in irritation.
Ingestion: Oral induction can cause kidney and liver injury. Large doses could be fatal.

C. FIRST AID

Eyes: Any material that contacts the eye should be washed out immediately and medical attention obtained if any symptoms are present after washing.
Inhalation: Remove to fresh air and consult medical personnel.
Ingestion: Give two glasses of water and consult medical personnel.

7. VENTILATION AND PERSONAL PROTECTION

A. VENTILATION: Good ventilation should be sufficient to control airborne levels. Supplementary local exhaust ventilation may be needed in special circumstances, such as poorly ventilated spaces, spraying, heating, etc.

B. RESPIRATORY PROTECTION: If respiratory protection is needed, an appropriate NIOSH-approved respirator for organic vapor should be worn.

C. SKIN AND EYE PROTECTION: Wear safety glasses with side shields or goggles. A face shield is recommended. An eye bath should be available. Wash thoroughly after handling. Good hygiene practice should be followed which includes minimizing skin contact.

8. SPECIAL HANDLING AND STORAGE

KEEP FROM CONTACT WITH STRONG OXIDIZING AGENTS AND EXTREME HEAT IN EXCESS OF 300° C.
SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUE, FOLLOW PRODUCT LABEL WARNINGS EVEN AFTER CONTAINER IS EMPTIED.

9. ACCIDENTAL RELEASE MEASURES AND DISPOSAL

SPILLS OR LEAKS: SMALL SPILLS MAY BE COLLECTEDWITH ABSORBENT MATERIALS. FOR LARGER SPILLS, FLUSH AREA WITH WATER SPRAY. PREVENT RUNOFF FROM ENTERING DRAINS, SEWERS, OR STREAMS.

WASTE DISPOSAL METHOD: DISPOSE OF OBSERVING ALL FEDERAL, STATE, AND LOCAL LAWS.

10. TRANSPORTATION INFORMATION

DOT
PROPER SHIPPING NAME: Not regulated
HAZARD CLASS: Not regulated
ID NUMBER: Not regulated
LABEL REQUIRED: Not regulated
IMDG PROPER SHIPPING NAME: Not a dangerous good
IATA PROPER SHIPPING NAME: Not a dangerous good

Material Safety Data Sheet

1. MATERIAL AND COMPANY IDENTIFICATION

Material Name : **Super S Multipurpose D/M Automatic Transmission Fluid**

Manufacturer/Supplier : **Smitty's Supply, Inc.**
PO Box 530
Roseland, LA 70456
USA

MSDS Request : 985-748-9687

Emergency Telephone Number
CHEMTREC : 800-424-9300 - toll free in the U.S., Canada, and U.S. Virgin Islands.
703-527-3887 - for calls originating elsewhere.
(Collect calls accepted)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Highly refined mineral oils and additives.
The highly refined mineral oil contains <3% (w/w) DMSO-extract, according to IP346.

3. HAZARDS IDENTIFICATION

Emergency Overview

Appearance and Odour : May be dyed. Liquid at room temperature. Slight hydrocarbon.

Health Hazards : Not classified as dangerous for supply or conveyance.
Safety Hazards : Not classified as flammable but will burn.
Environmental Hazards : Not classified as dangerous for the environment.

Health Hazards : Not expected to be a health hazard when used under normal conditions.

Health Hazards
Inhalation : Under normal conditions of use, this is not expected to be a primary route of exposure.
Skin Contact : Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.
Eye Contact : May cause slight irritation to eyes.
Ingestion : Low toxicity if swallowed.
Other Information : Used oil may contain harmful impurities.

Signs and Symptoms : Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Ingestion may result in nausea, vomiting and/or diarrhoea.

Aggravated Medical Condition : Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Skin.

Environmental Hazards : Not classified as dangerous for the environment.

Additional Information : Under normal conditions of use or in a foreseeable emergency, this product does not meet the definition of a hazardous

chemical when evaluated according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

4. FIRST AID MEASURES

General Information	:	Not expected to be a health hazard when used under normal conditions.
Inhalation	:	No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.
Skin Contact	:	Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.
Eye Contact	:	Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.
Ingestion	:	In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.
Advice to Physician	:	Treat symptomatically.

5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

Flash point	:	> 176.67 °C / 350.01 °F (COC)
Upper / lower Flammability or Explosion limits	:	Typical 1 - 10 %(V)(based on mineral oil)
Auto ignition temperature	:	> 320 °C / 608 °F
Specific Hazards	:	Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds.
Suitable Extinguishing Media	:	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable Extinguishing Media	:	Do not use water in a jet.
Protective Equipment for Firefighters	:	Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on disposal. Observe all relevant local and international regulations.

Protective measures	:	Avoid contact with skin and eyes. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.
Clean Up Methods	:	Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay,

sand or other suitable material and dispose of properly.

Additional Advice : Local authorities should be advised if significant spillages cannot be contained.

7. HANDLING AND STORAGE

General Precautions : Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

Handling : Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used.

Storage : Keep container tightly closed and in a cool, well-ventilated place. Use properly labelled and closeable containers. Storage Temperature: 0 - 50 °C / 32 - 122 °F

Recommended Materials : For containers or container linings, use mild steel or high density polyethylene.

Unsuitable Materials : PVC.

Additional Information : Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Material	Source	Type	ppm	mg/m3	Notation
Oil mist, mineral	ACGIH	TWA(Mist.)		5 mg/m3	
Oil mist, mineral	ACGIH	STEL(Mist.)		10 mg/m3	

Exposure Controls : The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control airborne concentrations. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

Personal Protective Equipment : Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Respiratory Protection : No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker

		health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapours [boiling point >65 °C (149 °F)].
Hand Protection	:	Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.
Eye Protection	:	Wear safety glasses or full face shield if splashes are likely to occur.
Protective Clothing	:	Skin protection not ordinarily required beyond standard issue work clothes.
Monitoring Methods	:	Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.
Environmental Exposure Controls	:	Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	May be dyed. Liquid at room temperature.
Odour :		Slight hydrocarbon.
pH :		Not applicable.
Initial Boiling Point and Boiling Range	:	> 280 °C / 536 °F estimated value(s)
Flash point	:	> 176.67 °C / 350.01 °F (COC)
Upper / lower Flammability or Explosion limits	:	Typical 1 - 10 %(V) (based on mineral oil)
Auto-ignition temperature	:	> 320 °C / 608 °F
Vapour pressure	:	< 0.5 Pa at 20 °C / 68 °F (estimated value(s))
Specific gravity	:	Data not available
Water solubility	:	Negligible.
n-octanol/water partition coefficient (log Pow)	:	> 6 (based on information on similar products)
Kinematic viscosity	:	> 40 mm2/s
Vapour density (air=1)	:	> 1 (estimated value(s))
Evaporation rate (nBuAc=1)	:	Data not available

10. STABILITY AND REACTIVITY

Stability	:	Stable.
Conditions to Avoid	:	Extremes of temperature and direct sunlight.
Materials to Avoid	:	Strong oxidizing agents.
Hazardous Decomposition Products	:	Hazardous decomposition products are not expected to form during normal storage.

11. TOXICOLOGICAL INFORMATION

Basis for Assessment	:	Information given is based on data on the components and the toxicology of similar products.
Acute Oral Toxicity	:	Expected to be of low toxicity: LD50 > 5000 mg/kg , Rat
Acute Dermal Toxicity	:	Expected to be of low toxicity: LD50 > 5000 mg/kg , Rabbit
Acute Inhalation Toxicity	:	Not considered to be an inhalation hazard under normal conditions of use.
Skin Irritation	:	Expected to be slightly irritating. Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.
Eye Irritation	:	Expected to be slightly irritating.
Respiratory Irritation	:	Inhalation of vapours or mists may cause irritation.
Sensitisation	:	Not expected to be a skin sensitiser.
Repeated Dose Toxicity	:	Not expected to be a hazard.
Mutagenicity	:	Not considered a mutagenic hazard.
Carcinogenicity	:	Product contains mineral oils of types shown to be non-carcinogenic in animal skin-painting studies. Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC). Other components are not known to be associated with carcinogenic effects.
Reproductive and Developmental Toxicity	:	Not expected to be a hazard.
Additional Information	:	Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the environment on disposal. ALL used oil should be handled with caution and skin contact avoided as far as possible.

12. ECOLOGICAL INFORMATION

Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products.

Acute Toxicity	:	Poorly soluble mixture. May cause physical fouling of aquatic organisms. Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l (to aquatic organisms) (LL/EL50 expressed as the nominal amount of product required to prepare aqueous test extract). Mineral oil is not expected to cause any chronic effects to aquatic organisms at concentrations less than 1 mg/l.

Mobility	:	Liquid under most environmental conditions. Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.
Persistence/degradability	:	Expected to be not readily biodegradable. Major constituents are expected to be inherently biodegradable, but the product contains components that may persist in the environment.
Bioaccumulation	:	Contains components with the potential to bioaccumulate.
Other Adverse Effects	:	Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

13. DISPOSAL CONSIDERATIONS

Material Disposal	:	Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses.
Container Disposal	:	Dispose in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.
Local Legislation	:	Disposal should be in accordance with applicable regional, national, and local laws and regulations.

14. TRANSPORT INFORMATION

US Department of Transportation Classification (49CFR)
This material is not subject to DOT regulations under 49 CFR Parts 171-180.

IMDG
This material is not classified as dangerous under IMDG regulations.

IATA (Country variations may apply)
This material is not classified as dangerous under IATA regulations.

15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Federal Regulatory Status

Notification Status

EINECS	All components listed.
TSCA	All components listed.
DSL	All components listed.

SARA Hazard Categories (311/312)
No SARA 311/312 Hazards.

State Regulatory Status

California Safe Drinking Water and Toxic Enforcement Act (Proposition 65)

This product contains a chemical known to the State of California to cause cancer.
Known to the State of California to cause birth defects or other reproductive harm.

16. OTHER INFORMATION

NFPA Rating (Health, Fire, Reactivity)	:	0, 1, 0
MSDS Version Number	:	2.0
MSDS Effective Date	:	06/15/2009
MSDS Revisions	:	A vertical bar (|) in the left margin indicates an amendment from the previous version.
MSDS Regulation	:	The content and format of this MSDS is in accordance with the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
MSDS Distribution	:	The information in this document should be made available to all who may handle the product.
Disclaimer	:	The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. No warranty or guarantee is expressed or implied regarding the accuracy of these data or the results to be obtained from the use of the product.

SAFETY DATA SHEET

1. Product and Company Identification

Product identifier **Super Sani-Cloth Germicidal Wipe** **SDS 0020-00**

Other means of identification Not available

Recommended use Disinfectant

Recommended restrictions For Professional and Hospital Use

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Professional Disposables International, Inc.

Address Two Nice-Pak Park
Orangeburg, NY 10962-1376

Telephone Phone (USA) 1-845-365-1700 (M-F 9am - 5pm)
Emergency Phone: 1-800-999-6423

E-mail www.pdihc.com

Emergency phone number 1-800-999-6423

2. Hazards Identification

Physical hazards Flammable solids Category 1

Health hazards Serious eye damage/eye irritation Category 2A

Environmental hazards Not determined

OSHA defined hazards None additional

Not applicable.

Label elements

Signal word Danger

Hazard statement Flammable solid.
Causes serious eye irritation.

Precautionary statement

Prevention Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Wash thoroughly after handling.

Response If in eyes: Rinse cautiously with water for 15 - 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
In case of fire: Use appropriate media to extinguish.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information Not applicable.

3. Composition/Information on Ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Isopropyl Alcohol		67-63-0	55
n-Alkyl (60% C14, 32% C16, 5% C12, 5% C18) dimethyl benzyl ammonium chlorides		68391-01-5	0.25
n-Alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chlorides		68956-79-6	0.25

4. First Aid Measures

Inhalation	Not a normal route of exposure. If inhaled, remove to fresh air. Get medical attention if symptoms develop.
Skin contact	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes.
Eye contact	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
Ingestion	Not a likely route of exposure. If ingestion does occur, call a poison control center or doctor for treatment advice.
Most important symptoms/effects, acute and delayed	Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
Indication of immediate medical attention and special treatment needed	Treat patient symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Avoid contact with eyes.

5. Fire Fighting Measures

Suitable extinguishing media	Water. Water fog. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection.
Fire-fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. In the event of fire, cool product with water spray. Move product from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. Move products from fire area if you can do so without risk. Cool containers exposed to flames with water until well after the fire is out. In the event of fire and/or explosion do not breathe fumes.
General fire hazards	Flammable solid.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Wear appropriate protective equipment and clothing during clean-up. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Pick up and discard towelette. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and Storage

Precautions for safe handling	Not a skin wipe. For use on hard non-porous surfaces only. Do not use or store near heat or open flame. Use according to package label instructions. Use good industrial hygiene practices in handling this product. Wear appropriate personal protective equipment. Wash thoroughly after handling. When using do not eat or drink.
Conditions for safe storage, including any incompatibilities	Do not contaminate water, food or feed by storage or disposal. When not in use keep container closed to prevent moisture loss. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure Controls/Personal Protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Isopropyl Alcohol (CAS 67-63-0)	PEL	980 mg/m3
		400 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Isopropyl Alcohol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Isopropyl Alcohol (CAS 67-63-0)	STEL	1225 mg/m3
		500 ppm
	TWA	980 mg/m3
		400 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Isopropyl Alcohol (CAS 67-63-0)	40 mg/l	Acetone	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines Chemicals listed in section 3 that are not listed here do not have established limit values for ACGIH or OSHA PEL.

Appropriate engineering controls Provide eyewash station.
Ensure adequate ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear eye protection as appropriate.

Skin protection

Hand protection Wear disposable protective gloves as appropriate.

Other As required by employer code.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards Not available.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. When using do not eat or drink. When using do not smoke.

9. Physical and Chemical Properties

Appearance Liquid saturated on wipe

Physical state Solid.

Form Solid.

Color Colorless to Slightly yellow

Odor Alcohol

Odor threshold Not available.

pH 5.75 - 8.50

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Pour point Not available.

Specific gravity 0.892

Partition coefficient (n-octanol/water) Not available.

Flash point 75.0 °F (23.9 °C) (Liquid)

Evaporation rate Not available.

Flammability (solid, gas) Flammable solid.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and Reactivity

Reactivity	Do not use on natural marble, windows, unpainted wood or brass, clear plastic or colored grout. This product may react with strong acids and strong oxidizing agents.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Material is stable under normal conditions.
Conditions to avoid	Contact with incompatible materials. Heat, flames and sparks.
Incompatible materials	Strong oxidizing agents. Acids. Isocyanates. Chlorine.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon. Ammonia. Chloride compounds

11. Toxicological Information

Information on likely routes of exposure

Ingestion	Harmful if swallowed.
Inhalation	Health injuries are not known or expected under normal use.
Skin contact	Non-irritating based on test data.
Eye contact	Causes serious eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Information on toxicological effects

Acute toxicity

Components	**Species**	**Test Results**
Isopropyl Alcohol (CAS 67-63-0)		
Acute		
Dermal		
LD50	Rabbit	12800 mg/kg
Inhalation		
LC50	Rat	16970 mg/l/4h
Oral		
LD50	Dog	4797 mg/kg
	Mouse	3600 mg/kg
	Rabbit	5030 mg/kg
	Rat	4396 mg/kg
n-Alkyl (60% C14, 32% C16, 5% C12, 5% C18) dimethyl benzyl ammonium chlorides (CAS 68391-01-5)		
Acute		
Dermal		
LD50	Rat	2000 mg/kg
		1420 mg/kg
Inhalation		
LC50	Not available	
Oral		
LD50	Mouse	150 mg/kg
	Rat	240 mg/kg

Components	Species	Test Results
n-Alkyl (68% C12, 32% C14) dimethyl ethylbenzyl ammonium chlorides (CAS 68956-79-6)		
Acute		
Dermal		
LD50	Not available	
Inhalation		
LC50	Not available	
Oral		
LD50	Rat	250 mg/kg

Skin corrosion/irritation Non-irritating based on test data.

Exposure minutes Not available.

Erythema value Not available.

Oedema value Not available.

Serious eye damage/eye irritation Causes serious eye irritation based on test results.

Corneal opacity value Not available.

Iris lesion value Not available.

Conjunctival reddening value Not available.

Conjunctival oedema value Not available.

Recover days Not available.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization Not applicable.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Narcotic effects.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not classified.

Chronic effects Prolonged inhalation may be harmful.

Further information Not available.

12. Ecological Information

Ecotoxicity See below

Components		Species	Test Results
Isopropyl Alcohol (CAS 67-63-0)			
Algae	IC50	Algae	1000 mg/L, 72 Hours
Crustacea	EC50	Daphnia	13299 mg/L, 48 Hours
Aquatic			
Fish	LC50	Bluegill (Lepomis macrochirus)	> 1400 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

Isopropyl Alcohol 0.05

Mobility in soil No data available.

Mobility in general Not available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal Considerations

Disposal instructions	Follow container label directions carefully. Do not reuse towelette. Dispose of used towelette in trash. Do not flush in toilet. Nonrefillable container. Do not resue or refill this container. Triple rinse and offer for recycling. If recycling is not available, put in trash collection. Review federal, state/provincial, and local government requirements prior to disposal. Dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container.
Local disposal regulations	See above
Hazardous waste code	Assign as required.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

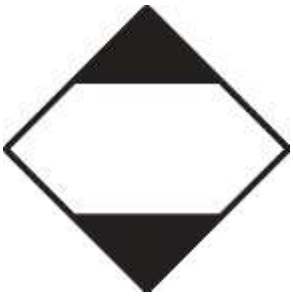
14. Transport Information

U.S. Department of Transportation (DOT)

Basic shipping requirements:

UN number	UN3175
Proper shipping name	Solids containing flammable liquid, n.o.s. (Isopropyl Alcohol)
Hazard class	4.1
Packing group	II
Packaging exceptions	<1kg - limited quantity (par. 173.151)

DOT



15. Regulatory Information

US federal regulations

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

PRECAUTIONARY STATEMENTS:
Hazards to Humans and Domestic Animals. Warning: Causes substantial but temporary eye damage. Do not get in eyes or on clothing. Avoid contact with skin. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using restroom. Remove and wash contaminated clothing before reuse.

EPA Reg. # 9480-4

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Isopropyl Alcohol (CAS 67-63-0) Listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Isopropyl Alcohol	67-63-0	55

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA) Not regulated.

US state regulations California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US - California Hazardous Substances (Director's): Listed substance

Isopropyl Alcohol (CAS 67-63-0) Listed.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

US - Illinois Chemical Safety Act: Listed substance

Isopropyl Alcohol (CAS 67-63-0) Listed.

US - Louisiana Spill Reporting: Listed substance

Isopropyl Alcohol (CAS 67-63-0) Listed.

US - Minnesota Haz Subs: Listed substance

Isopropyl Alcohol (CAS 67-63-0) Listed.

US - New Jersey RTK - Substances: Listed substance

Isopropyl Alcohol (CAS 67-63-0) Listed.

US - Texas Effects Screening Levels: Listed substance

Isopropyl Alcohol (CAS 67-63-0) Listed.
n-Alkyl (60% C14, 32% C16, 5% C12, 5% C18) dimethyl benzyl ammonium chlorides (CAS 68391-01-5) Listed.

US. Massachusetts RTK - Substance List

Isopropyl Alcohol (CAS 67-63-0) Listed.

US. Pennsylvania RTK - Hazardous Substances

Isopropyl Alcohol (CAS 67-63-0) Listed.

US. Rhode Island RTK

Isopropyl Alcohol (CAS 67-63-0) Listed.

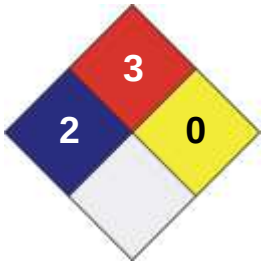
Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	/ 2
FLAMMABILITY	3
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X



Disclaimer	The information in the sheet was written based on the best knowledge and experience currently available. Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.
Issue date	27-March-2015
Further information	For any questions surrounding this SDS, please contact the supplier/manufacturer listed on the first page of the document. It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Not for use on skin. Not a baby wipe. For use on hard surfaces only. Do not use on natural marble, windows, unpainted wood, brass, clear plastic or coloured grout. Revision 1. Changed eye toxicity categorization to Category 2A and revised transportation section. Also changed bulk liquid number and made other miscellaneous changes. Based on bulk liquid # 4FQ51801.
Other information	This Safety Data Sheet was prepared to comply with the current OSHA Hazard Communication Standard (HCS) adoption of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).
Prepared by	Dell Tech Laboratories, Ltd. Phone: (519) 858-5021

SAFETY DATA SHEET

1. Identification

Product identifier **SUPER SHINE-ALL**

Other means of identification

SDS number 476N84A

Product code HIL00140

Recommended use Neutral Cleaner

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Manufacturer

Company name HILLYARD INDUSTRIES

Address 302 North Fourth St.
St. Joseph, MO 64501

Contact person Regulatory Affairs

Telephone number (816) 233-1321 (Ext. 8285)

Fax (816) 383-8485

E-mail regulatoryaffairs@hillyard.com

Emergency telephone # (800) 424-9300
(Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals)

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Serious eye damage/eye irritation Category 2B

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word Warning

Hazard statement Causes eye irritation.

Precautionary statement

Prevention Wash thoroughly after handling. Observe good industrial hygiene practices.

Response If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Storage Store away from incompatible materials.

Disposal Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law. Waste from normal use may be sewered to a public-owned treatment works in compliance with applicable federal, state and local requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information Do not get in eyes, on skin, or on clothing. Avoid breathing spray mist. Use with adequate ventilation. Wash thoroughly after handling. Do not take internally. Keep container closed when not in use. If prolonged or repeated contact is possible, wear rubber or other impervious gloves and splash goggles. Use only as directed: Improper dilution can lead to adverse health effects.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Alcohols (C12-15 ln, Saturated) Ethoxylate		68131-39-5	< 0.2

Chemical name	Common name and synonyms	CAS number	%
Camphor		76-22-2	0.003
Pin-2(3)-ene		80-56-8	0.0009
Other components below reportable levels			90 - 100

Additional components

Chemical name	CAS number	%
Fatty Acids, Tall-oil, Triethanolamine Salts	67784-78-5	2 - < 3.05
Tall Oil, Potassium Salt	68647-71-2	0.5 - < 1

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Avoid contact with eyes. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Camphor (CAS 76-22-2)	PEL	2 mg/m3

US. ACGIH Threshold Limit Values

Components	Type	Value
Camphor (CAS 76-22-2)	STEL	3 ppm
	TWA	2 ppm
Pin-2(3)-ene (CAS 80-56-8)	TWA	20 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Camphor (CAS 76-22-2)	TWA	2 mg/m3

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls General ventilation normally adequate. Provide eyewash station.

Individual protection measures, such as personal protective equipment

Eye/face protection Chemical splash goggles where there is a potential for eye contact.

Skin protection

Hand protection For prolonged or repeated skin contact use suitable protective gloves.

Other None normally required. If unable to avoid prolonged or repeated contact with skin, wear impervious clothing.

Respiratory protection Not normally needed.

Thermal hazards Not applicable.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance Light amber liquid

Physical state Liquid.

Form Liquid.

Color Light Amber, Will darken with age.

Odor Sassafras odor

Odor threshold Not available

pH 9 - 9.3
8 - 9 (diluted 1:128)

Melting point/freezing point Not available

Initial boiling point and boiling range 205 °F (96.11 °C)

Flash point > 205.0 °F (> 96.1 °C) Tag Closed Cup

Evaporation rate < 1 Ethyl ether = 1

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 17.6 mm Hg

Vapor density	0.6 Air=1
Relative density	1.0076 at 77°F
Solubility(ies)	
Solubility (water)	100 % Complete
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Other information	
Density	8.39 lb/gal
Percent volatile	87 - 88 %
VOC (Weight %)	0.62 %

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Causes eye irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort.

Information on toxicological effects

Acute toxicity

Product	**Species**	**Test Results**
SUPER SHINE-ALL		
Acute		
Dermal		
LD50	Guinea pig	548.1597 ml/kg estimated
Inhalation		
LC50	Mouse	72950.5547 mg/l, 4 Hours estimated
Oral		
LD50	Guinea pig	800.1812 g/kg estimated
	Rabbit	2192.6389 g/kg estimated
	Rat	675.5253 g/kg estimated

Components	**Species**	**Test Results**
Camphor (CAS 76-22-2)		
Acute		
Oral		
LD50	Mouse	1310 mg/kg

Components	Species	Test Results
Pin-2(3)-ene (CAS 80-56-8)		
Acute		
Oral		
LD50	Rat	3700 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Causes eye irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Prolonged inhalation may be harmful.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product		Species	Test Results
SUPER SHINE-ALL			
Aquatic			
Crustacea	EC50	Daphnia	12642.2568 mg/l, 48 hours estimated
Fish	LC50	Fish	23245.6738 mg/l, 96 hours estimated

Components		Species	Test Results
Alcohols (C12-15 ln, Saturated) Ethoxylate (CAS 68131-39-5)			
Aquatic			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	0.37 - 0.43 mg/l, 48 hours
Fish	LC50	Channel catfish (Ictalurus punctatus)	1.04 - 1.39 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Pin-2(3)-ene 4.83

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law. Do not contaminate ponds, waterways or ditches with chemical or used container.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Waste from normal product use may be sewered to a public owned treatment works (POTW) in compliance with applicable Federal, State, and local pretreatment requirements.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Triple rinse (or equivalent). Then offer clean, dry container for recycling or reconditioning.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Camphor (CAS 76-22-2)
Pin-2(3)-ene (CAS 80-56-8)

US. New Jersey Worker and Community Right-to-Know Act

Camphor (CAS 76-22-2)
Pin-2(3)-ene (CAS 80-56-8)

US. Pennsylvania Worker and Community Right-to-Know Law

Camphor (CAS 76-22-2)
Pin-2(3)-ene (CAS 80-56-8)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	03-11-2015
Revision date	04-06-2016
Version #	02
Further information	This product meets Green Seal™ Standard GS-37 based on effective performance, concentrated volume, minimized/recycled packaging, and protective limits on VOCs and human & environmental toxicity. GreenSeal.org.
HMIS® ratings	Health: 1 Flammability: 0 Physical hazard: 0
Disclaimer	No representations or warranties, either express or implied, of merchantability, fitness for a particular purpose, or of any nature are made with respect to the product(s) or information contained in this material safety data sheet. The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate. The buyer or user assumes all risks associated with the use, misuse or disposal of this product. The buyer or user is responsible to comply with all federal, state or local regulations concerning the use, misuse or disposal of these products.
Revision Information	Exposure controls/personal protection: Appropriate engineering controls Physical & Chemical Properties: Multiple Properties Toxicological Information: Toxicological Data Transport Information: Agency Name, Packaging Type, and Transport Mode Selection

SSP
Prepared by: Regulatory Affairs Dept.

MATERIAL SAFETY DATA SHEET

(Prepared According to 29 CFR 1910.1200)

N/A=Not Applicable
Effective Date: 5/99 Revision: n/a

SECTION 1-PRODUCT IDENTIFICATION AND SUPPLIER INFORMATION

Manufacturer's Name:
Misco Products Corporation
Manufacturer's Address:
1048 Stinson Drive Reading, PA 19605
Manufacturer's Phone #: (610) 926-4106

Product Name: Super Strip Plus
Generic Name: Extra Duty Stripper
Chemical Family: Alkaline Detergent Blend
Formula: Proprietary

SECTION 2-INGREDIENT INFORMATION

CHEMICAL NAME	CAS NO.	WT. %	PEL	TWA-TLV	STEL-TLV
Water	7732-18-5	to 100			
2-Butoxyethanol	111-76-2	10 to 15	25 ppm	25 ppm	
Monoethanolamine	141-43-5	5 to 10	3 ppm	3 ppm	6 ppm
Potassium Tall Oil Soap	61790-44-1	0 to 5			
Nonionic Surfactant	9016-45-9	0 to 5			
Sodium Silicate	1344-09-8	0 to 5			
Tetrasodium Pyrophosphate	7722-88-5	0 to 5			
Tetrasodium EDTA	64-02-8	0 to 5			
Perfume Oils	N/A	0 to 5			

SECTION 3-PHYSICAL DATA

Boiling Point (°F): 215 F.
Specific Gravity: 1.027
Vapor Pressure: 20mm Hg @ 68 F.
Vapor Density (Air=1): >1
% Volatile: 90+
pH: 12.3-12.8
Solubility in Water: Complete
Evaporation Rate (Water=1): <1
Physical Description: Thin liquid with characteristic odor.

SECTION 4-FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): None
Upper Explosion Limit: N/A
Lower Explosion Limit: N/A
Extinguishing Media: None Required
Special Firefighting Procedures: Non Flammable
Unusual Fire and Explosion Hazards: N/A

SECTION 5-REACTIVITY DATA

Stability: Stable
Hazardous Polymerization: None
Hazards Decomposition Products: Alkaline vapors in a fire.
Incompatibility (Materials to Avoid): Strong acids.

SECTION 6-STORAGE AND HANDLING INFORMATION

Keep out of reach of children. For use by trained personnel only. Keep unauthorized personnel away when applying to floor. Keep container closed during storage. For institutional and industrial use only. Avoid contact with eyes, skin and clothing. Wear protective gloves, eyewear and rubber boots when handling concentrate and diluted material. Avoid breathing of vapors. Use in well-ventilated area.

SECTION 7-HEALTH HAZARDS AND FIRST AID

Effects of Overexposure:
Skin: Skin irritant. May cause moderate reddening and swelling.
Eyes: Eye irritant. Liquid and mists may damage eyes, causing corneal damage.
Inhalation: Vapors and mists may be irritating to mucous membranes in the nose, throat, and lungs.
Ingestion: Irritating and corrosive to the mouth and throat. May cause headache, nausea, abdominal pain, vomiting, and diarrhea. Excessive amounts may cause collapse.

First Aid Procedures:
Skin: Flush with water. Seek medical attention if irritation persists. Avoid contact with eyes, skin, and clothing.
Eyes: Flush with large quantities of water, holding eyelids open. Seek medical attention immediately.
Inhalation: Get to fresh air. Seek medical attention if irritation persists.
Ingestion: Do not induce vomiting. Drink large quantities of water. Seek medical attention immediately.

SECTION 8-SPECIAL PROTECTION INFORMATION

Respiratory Protection: Use in well-ventilated area. NIOSH Approved Organic vapor respirator when using in confined or poorly ventilated areas.
Ventilation Requirements: Provide local exhaust to keep TLV of Section 2 ingredients below acceptable limit.
Protective Gloves: Chemical resistant rubber or neoprene.
Eye Protection: Chemical splash goggles or full-face shield.
Other Protective Equipment: Eyewash station should be nearby. Protective footwear (rubber boots) and outerwear should be worn when using product on floor.

SECTION 9-SPILL OR LEAK PROCEDURES

Steps to be taken in Case Material is Released or Spilled: Floors will become slippery. Avoid walking in product. Keep unessential personnel away. Ventilate areas well. Mop up or otherwise absorb and hold disposal. Avoid discharge to sewer or open waterways.
Waste Disposal Method: Any method in accordance with local, state and federal laws. Best method is to recycle or reuse for intended purpose. Consult local authorities for disposal in public sewer. Do not dispose of into storm drain, stream, river or to ground. Rinse container thoroughly before discarding in trash.

SECTION 10-REGULATORY INFORMATION

SARA Title III - Section 311/312 -Hazard Categories:
No - Fire Hazard
No - Sudden Release of Pressure Hazard
No - Reactivity Hazard
Yes - Immediate (acute) Health Hazard
No - Delayed (chronic) Health Hazard

Shipping Information:
FOR CONTAINERS > 1 Gallon : Cleaning Compound
FOR 1 GALLON CONTAINERS : Cleaning Compound
FOR CONTAINERS < 1 GALLON : Cleaning Compound

HMIS Hazardous Materials Identification System

Health	2
Flammability	0
Reactivity	0
Personal Protection	B

FOR EMERGENCY MEDICAL OR TRANSPORT INFORMATION: CHEM-TEL, Inc. @ 800-255-3924 **(24 hours, 7 days per week)**

This product contains the following toxic chemical(s) subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372.

CAS#	Chemical Name	Percent by Weight
111-76-2	2-Butoxyethanol (Glycol Ether)	10.0%

This product contains the following chemical(s) which have been established to be either a carcinogen or suspected carcinogen.

CAS#	Chemical Name	Percent by Weight
	None	

SECTION 11-OTHER INFORMATION

This company cannot anticipate all conditions of handling and use of this product. Therefore, this company accepts no responsibility for results obtained by the application of this information, or the safety and suitability of our products either alone or in combination with other products. It is the responsibility of the user to provide a safe workplace, using the health and safety information contained herein as a guide. This company will accept no liability for damages or loss incurred from the improper handling and use of this product

Material Safety Data Sheet: SURE FLOW II, MM

Supercedes Date 08/20/2010 **Issuing Date** 08/20/2013

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name SURE FLOW II, MM
Recommended use Use in drains
Information on Manufacturer
CERTIFIED LABS, DIV. OF NCH CORP.
BOX 152170
IRVING, TEXAS 75015

Product Code 0269
Chemical nature Aqueous solution Alkaline
Emergency Telephone Number
CHEMTREC® 800-424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview
DANGER
Corrosive
Causes skin and eye burns
May cause delayed lung injury and burns
Harmful or fatal if swallowed

Color Blue **Physical State** Liquid **Odor** Odorless

Potential Health Effects

Principle Route of Exposure	Skin contact, Eye contact, Inhalation.
Primary Routes of Entry	None known
Acute Effects	
Eyes	Corrosive to the eyes and may cause severe damage including blindness.
Skin	Causes skin burns.
Inhalation	Harmful by inhalation. Causes burns.
Ingestion	If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.
Chronic Toxicity	Inhaled corrosive substances can lead to a toxic edema of the lungs.
Target Organ Effects	Respiratory system, Eyes, Skin.
Aggravated Medical Conditions	Skin disorders, Respiratory disorders.
Potential Environmental Effects	See Section 12 for additional Ecological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No
Potassium hydroxide	1310-58-3
Sodium hydroxide	1310-73-2

4. FIRST AID MEASURES

General advice	Do not get in eyes, on skin or on clothing. Do not breathe mist.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately.
Skin Contact	Remove immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately.
Inhalation	Move to fresh air. In case of shortness of breath, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
Ingestion	Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person. Rinse mouth.
Notes to physician	The product causes burns of eyes, skin and mucous membranes. Control of circulatory system, shock therapy if needed.

5. FIRE-FIGHTING MEASURES

Flash Point Does not flash **Method** Not applicable
Autoignition Temperature No information available.
Flammability Limits in Air % Hydrogen, by reaction with metals. **Upper** 75 **Lower** 4
Suitable Extinguishing Media
Water spray. Foam. Alcohol-resistant foam. Carbon dioxide (CO_2). Dry chemical. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Specific hazards arising from the chemical
Material can create slippery conditions. Contact with metals liberates flammable hydrogen gas.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA	**Health** 3	**Flammability** 1	**Instability** 0
HMIS	**Health** 3	**Flammability** 1	**Instability** 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Ensure adequate ventilation. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.

Environmental Precautions Do not flush into surface water or sanitary sewer system.

Methods for Containment Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13)

Methods for Cleaning Up Pick up and transfer to properly labeled containers

Neutralizing Agent Acetic acid, diluted.

7. HANDLING AND STORAGE

Handling Do not get in eyes, on skin or on clothing. Do not breathe mist.

Storage Store in original container. Metal containers must be lined. Keep containers tightly closed in a dry, cool and well-ventilated place.

Storage Temperature **Minimum** 35 °F / 2 °C **Maximum** 120 °F / 49 °C

Storage Conditions **Indoor** X **Outdoor** **Heated** **Refrigerated**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Potassium hydroxide	Ceiling: 2 mg/m^3	No data available	Ceiling: 2 mg/m^3
Sodium hydroxide	Ceiling: 2 mg/m^3	TWA: 2 mg/m^3	IDLH: 10 mg/m^3 Ceiling: 2 mg/m^3

Engineering Measures Ensure adequate ventilation, especially in confined areas. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

Personal Protective Equipment

- **Eye/Face Protection** Tightly fitting safety goggles. Face-shield.
- **Skin Protection** Wear suitable protective clothing, Impervious gloves.
- **Respiratory Protection** In case of insufficient ventilation wear suitable respiratory equipment. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

General Hygiene Considerations Wear protective gloves/clothing. Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	**Viscosity**	Viscous
Color	Blue	**Odor**	Odorless
Appearance	Hazy	**pH**	14
Specific Gravity	1.31	**Evaporation Rate**	0.43 (Butyl acetate=1)
Percent Volatile (Volume)	80.9	**VOC Content (%)**	0
VOC Content (g/L)	0	**Vapor Pressure**	11.4 mmHg @ 70°F
Vapor Density	0.6 (Air = 1.0)	**Solubility**	Completely soluble
Boiling Point/Range	230 °F / 110 °C		

10. STABILITY AND REACTIVITY

Chemical Stability Stable. Hazardous polymerization does not occur.

Conditions to Avoid None known

Incompatible Products Strong oxidizing agents, Acids, Metals, Aldehydes, Highly halogenated compounds, Leather, Ammonia, Amines, Strong bases.

Hazardous Decomposition Products Carbon oxides, Potassium oxides, Hydrogen, by reaction with metals.

Possibility of Hazardous Reactions None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information No information available.

Component Information

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Potassium hydroxide	= 214 mg/kg (Rat)	no data available	no data available	no data available	no data available
Sodium hydroxide	no data available	= 1350 mg/kg (Rabbit)	no data available	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Potassium hydroxide	no data available	no data available	no data available	no data available	eyes, respiratory system, skin
Sodium hydroxide	no data available	no data available	no data available	no data available	eyes, respiratory system, skin

Carcinogenicity There are no known carcinogenic chemicals in this product.

Component	ACGIH	IARC	NTP	OSHA	Other
Potassium hydroxide	not applicable	not applicable	not applicable	not applicable	not applicable
Sodium hydroxide	not applicable	not applicable	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information No information available.

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Potassium hydroxide	no data available	LC50 = 80 mg/L Gambusia affinis 96 h	no data available	no data available	0.65 0.83
Sodium hydroxide	no data available	LC50 = 45.4 mg/L Oncorhynchus mykiss 96 h	no data available	no data available	N/A

Persistence and Degradability No information available.
Bioaccumulation No information available.
Mobility No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal Dispose of in accordance with local regulations.
Container Disposal Empty containers should be taken for local recycling, recovery, or waste disposal.

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name Corrosive liquid, basic, inorganic, n.o.s.
Hazard Class 8
UN-No UN3266
Packing Group III
Reportable Quantity (RQ) Potassium hydroxide, RQ kg= 2049.30 Sodium hydroxide, RQ kg= 5044.47
Description UN3266, Corrosive liquid, basic, inorganic, n.o.s.(Potassium hydroxide,Sodium hydroxide), 8, PG III , RQ

TDG

Proper shipping name Corrosive liquid, basic, inorganic, n.o.s.
Hazard Class 8
UN-No UN3266
Packing Group III
Description UN3266, Corrosive liquid, basic, inorganic, n.o.s.(Potassium hydroxide,Sodium hydroxide), 8, PG III

ICAO

UN-No UN3266
Proper Shipping Name Corrosive liquid, basic, inorganic, n.o.s.
Hazard Class 8
Packing Group III
Shipping Description UN3266, Corrosive liquid, basic, inorganic, n.o.s.(Potassium hydroxide,Sodium hydroxide), 8, PG III

IATA

UN-No UN3266
Proper Shipping Name Corrosive liquid, basic, inorganic, n.o.s.
Hazard Class 8

Packing Group	III
ERG Code	8L
Shipping Description	UN3266, Corrosive liquid, basic, inorganic, n.o.s.(Potassium hydroxide,Sodium hydroxide), 8, PG III

IMDG/IMO

Proper Shipping Name	Corrosive liquid, basic, inorganic, n.o.s.
Hazard Class	8
UN-No	UN3266
Packing Group	III
EmS No.	F-A, S-B
Shipping Description	UN3266, Corrosive liquid, basic, inorganic, n.o.s.(Potassium hydroxide,Sodium hydroxide), 8, PG III

15. REGULATORY INFORMATION

Inventories

TSCA	Complies
DSL	Complies

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	No	No	No	No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Potassium hydroxide	1000 lb	Not applicable
Sodium hydroxide	1000 lb	Not applicable

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

E Corrosive material D1A Very toxic materials

16. OTHER INFORMATION

Prepared By	Devon Kebodeaux
Supercedes Date	08/20/2010
Issuing Date	08/20/2013
Reason for Revision	No information available.
Glossary	No information available.
List of References.	No information available.

CERTIFIED LABS, DIV. OF NCH CORP.assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage or disposal of the product. The information provided on this document is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND DISTRIBUTOR'S INFORMATION

NFPA Rating: Health-2; Flammability-2; Reactivity-0; Special-0

HMIS Rating: Health-2; Flammability-2; Reactivity-0; Personal Protection-B

Manufactured For: **Triple S**
Address: 2 Executive Park Dr.
Address: Billerica, MA 01862
Phone: 978-667-7900

DOT Hazard Classification: ORM-D
Identity (trade name as used on label)**:**
SURE SHOT PLUS

MSDS Number: 437 Revision- 2

EMERGENCY RESPONSE NUMBER: 1-800-255-3924
NOTICE: JUDGMENT BASED ON INDIRECT TEST DATA

Date Prepared: 02/12/98 Prepared By: KD/DL
Information Calls: 978-667-7900

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
PETROLEUM DISTILLATE	64742-48-9	No	500	500	d

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/A

Specific Gravity (H2O=1): Concentrate Only = .80

Vapor Pressure: PSIG @ 70°F (Aerosols): 85-100

Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A

Vapor Density (Air = 1): N/E

Evaporation Rate (= 1): N/E

Solubility in Water: None

Water Reactive: No

Appearance and Odor: Jet stream spray with petroleum distillate odor.

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) NOT FLAMMABLE

Auto Ignition Temperature N/E

Flammability Limits in Air by % in Volume: % LEL: N/E % UEL: N/E

FLASH POINT AND METHOD USED (non-aerosols): N/A
SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus.

EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide.

Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture.

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY [X] STABLE [ ] UNSTABLE

HAZARDOUS POLYMERIZATION [ ] WILL [X] WILL NOT OCCUR

Incompatibility (Mat. to avoid): Strong oxidizing agents.

Conditions to Avoid: Open flame, welding arcs, heat, sparks.

Hazardous Decomposition Products: CO, CO2.

SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: [X] INHALATION [ ] INGESTION [ ] SKIN ABSORPTION [ ] EYE [ ] NOT HAZARDOUS

ACUTE EFFECTS

Inhalation: Excessive inhalation of vapors can be harmful and may cause headache, dizziness, anesthetic effects, nausea, respiratory depression, cholinesterase depression.

Eye Contact: May cause irritation.

Skin Contact: May cause irritation and mild defatting of skin.

Ingestion: Possible chemical pneumonitis if aspirated into lungs. Nausea, vomiting.

CHRONIC EFFECTS: (Effects due to excessive exposure to the raw materials of this mixture) May cause cardiac abnormalities, central nervous system depression, lung, kidney, liver damage, inhibits cholinesterase.

Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions.

EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention.

Skin Contact: Wash with soap and water. If irritated, seek medical attention.

Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.

Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by U.S. Bureau of Mines for organic vapor.

Protective Gloves: Rubber, if skin easily irritated.

Eye Protection: Safety glasses recommended.

Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.

Other Protective Clothing & Equipment: None

Hygienic Work Practices: Wash with soap and water before handling food. Remove contaminated clothing.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Absorb with suitable medium. Incinerate or landfill according to local, state or federal regulations. DO NOT FLUSH TO SEWER.

Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.

Precautions To Be Taken In Handling & Storage: Do not puncture or incinerate containers. Do not store at temperatures above 130°F.

Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN. Avoid food contamination. Avoid breathing vapors. Remove ignition sources.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

** Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only

THIS MSDS IS CURRENT AS OFJANUARY 10, 2000. The DATE PREPARED section is the original date assembled and remains current until a change is necessary.

MATERIAL SAFETY DATA SHEET SURGE AEROSOL

DATE OF ISSUE: 10/04/2004
SUPERCEDES: 01/20/1999

SECTION I - GENERAL INFORMATION

Chemical Name & Synonyms: N/A
Trade Name & Synonyms: SURGE AEROSOL

Chemical Family: AQUEOUS SOLUTION
Formula Mixture: X

Manufacturer's Name:
MANTEK, DIVISION OF NCH CORP.

Address:
BOX 152170
IRVING, TEXAS 75015
Prepared By: M McDowell/Chemist
Product Code Number: 5020
Emergency Phone Number: 800-424-9300

SECTION II - HAZARDOUS INGREDIENTS

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS:

Chemical Name (Ingredients): ETHYLENE GLYCOL MONOBUTYL ETHER (EGBE)
Hazard: TOX/IRR
TLV: 20 PPM $1
PEL: 50 PPM 2
STEL: N/E
CAS#: 111-76-2

Chemical Name (Ingredients): PROPANE
Hazard: ASPHY/IRR
TLV: 1000 PPM#1
PEL: 1000 PPM 2
STEL: N/E
CAS#: 74-98-6

Chemical Name (Ingredients): ISOBUTANE
Hazard: ASPHY/IRR
TLV: 1000 PPM#1
PEL: N/E 2
STEL: N/E
CAS#: 75-28-5

Chemical Name (Ingredients): $ SKIN
Hazard:
TLV:
PEL:
STEL:
CAS#:

Chemical Name (Ingredients): # ALIPHATIC HYDROCARBON GASES
Hazard:
TLV:
PEL:
STEL:
CAS#:

SECTION IIa - NON-HAZARDOUS INGREDIENTS

(NON-HAZARDOUS INGREDIENT NAMES AND CAS NUMBERS ARE PROTECTED UNDER NJ TRADE)

Secret Registry #: 409363-5006P

SECTION III - PHYSICAL DATA

Boiling Point (f): 210°
Specific Gravity (H20=1): 1.010
Vapor Pressure (MM HG): 17.2
Color: COLORLESS-PLE YELLOW
Vapor Density (Air=1): 0.6
Odor: SWEET
PH @ 100%: 12.5
Clarity: TRANSPARENT
Volatile by Volume: 98
Evaporation Rate (BU A/C=1): 0.6
H20 Solubility: COMPLETE
Viscosity: NON-VISCOUS

SECTION IV - FIRE AND EXPLOSION HAZARD

Flash Point: NON-FLAM / N/A
Flammable Limits: PROPANE/ISOBUTANE LEL: 1.8 UEL:9.5

Extinguishing Media:
Foam: Alcohol Foam: X CO2: X
Dry Chemical: X Water Spray: X Other:

Special Fire Fighting Procedures:
FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. COOL FIRE-EXPOSED CONTAINERS WITH WATER SPRAY TO PREVENT BURSTING.

Unusual Fire and Explosion Hazards:
USE CARE AS SPILLS MAY BE SLIPPERY. FLAME EXTENSION IS 0 INCHES, BURNBACK IS 0 INCHES.

Aerosol Level (NFPA 30B): 1
NFPA 704 Hazard Rating:
(0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)
Health: 2 Flammability: 1 Instability: 0 Special:

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value:
NOT ESTABLISHED FOR MIXTURE. SEE SECTION II.

Effects of Overexposure:
-Acute(Short Term Exposure)
EYE CONTACT: CAUSES SEVERE IRRITATION SEEN AS STINGING, TEARING, REDNESS, AND A BURNING SENSATION.
SKIN CONTACT: MAY CAUSE IRRITATION SEEN AS ITCHING AND REDNESS. PRODUCT MAY BE ABSORBED THROUGH THE SKIN IN HARMFUL AMOUNTS.
INHALATION: MAY CAUSE RESPIRATORY IRRITATION SEEN AS COUGHING AND SNEEZING. AT LOW VAPOR CONCENTRATIONS, NO HARMFUL EFFECTS ARE EXPECTED. AT HIGH VAPOR CONCENTRATIONS, INHALATION MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS SUCH AS HEADACHE, DIZZINESS, DROWSINESS, WEAKNESS, UNCONCIOUSNESS, POSSIBLE ANESTHETIC EFFECTS FROM CENTRAL NERVOUS SYSTEM DEPRESSION, AND MAY BE FATAL.
INGESTION: MAY CAUSE IRRITATION WITH POSSIBLE NAUSEA, VOMITING, AND

DIARRHEA. MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS SIMILAR TO INHALATION, METABOLIC ACIDOSIS, AND SUBSEQUENT SECONDARY EFFECTS SUCH AS HEMOLYSIS, BLOOD ABNORMALITIES, LIVER AND KIDNEY EFFECTS, AND COMA.

-Chronic (Long Term Exposure)
EXCESSIVE INHALATION OF VAPORS MAY CAUSE THE APPEARANCE OF BLOOD IN THE URINE. REPEATED OR PROLONGED INHALATION MAY CAUSE LIVER ABNORMALITIES, KIDNEY OR LUNG DAMAGE, SPLEEN DAMAGE, BLOOD ABNORMALITIES, WEIGHT LOSS, ANOREXIA OR TESTES DAMAGE. MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE ARE PRE-EXISTING RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA, AND DERMATITIS; PRE-EXISTING LIVER, BLOOD, AND KIDNEY DISEASES. TARGET ORGANS: LIVER, LUNGS, KIDNEYS, SPLEEN, BLOOD, TESTES, AND CENTRAL NERVOUS SYSTEM.

Primary Routes of Entry: Inhalation: X Ingestion: Absorption:

Emergency and First Aid Procedures:
-Inhalation:
REMOVE FROM THE AREA TO FRESH AIR. IF NOT BREATHING, CLEAR THE AIRWAY AND START MOUTH TO MOUTH ARTIFICIAL RESPIRATION. GET IMMEDIATE MEDICAL ATTENTION.

-Eye Contact:
IMMEDIATELY RINSE THE EYES WITH WATER. REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING FOR AT LEAST 15 MINUTES. HOLD THE EYELIDS APART TO ENSURE RINSING OF THE ENTIRE SURFACE OF THE EYES AND LIDS WITH WATER. GET IMMEDIATE MEDICAL ATTENTION.

-Skin Contact:
WASH AFFECTED AREAS WITH LARGE AMOUNTS OF SOAP AND WATER FOR 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. SEEK MEDICAL ATTENTION IF IRRITATION PERSISTS. WASH CLOTHING AND CLEAN SHOES BEFORE REUSE.

-Ingestion:
GIVE 3 TO 4 GLASSES OF WATER, BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. GET IMMEDIATE MEDICAL ATTENTION. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON.

-Notes to Physician:
ORGANIC ABNORMALITIES RESULTING FROM OVEREXPOSURE TO ETHYLENE GLYCOL MONOBUTYL ETHER BY ANY ROUTE LIKELY WOULD BE AN ABNORMAL BLOOD PICTURE CHARACTERIZED BY ERYTHROPENIA, RETICULOCYTOSIS, GRANULOCYTOSIS,

AND LEUKOCYTOSIS. THE SIGNS AND SYMPTOMS OF POISONING INCLUDE ANION GAP METABOLIC ACIDOSIS, CNS DEPRESSION, RENAL TUBULAR INJURY, AND POSSIBLE LATE STAGE CRANIAL NERVE INVOLVEMENT.

TREATMENT SIMILAR TO ETHYLENE GLYCOL INTOXICATION MAY BE OF BENEFIT. IN CASES WHERE SEVERAL OUNCES HAVE BEEN INGESTED, CONSIDER THE USE OF ETHANOL AND HEMODIALYSIS IN THE TREATMENT. 4-METHYL PYRAZOLE (ANTIZOL (R)) IS AN EFFECTIVE BLOCKER OF ALCOHOL DEHYDROGENASE. FOMEPIZOLE MAY ALSO BE APPROPRIATE.

SECTION VI - TOXICITY INFORMATION

Product Contains Chemicals Listed as Carcinogen or Potential
Carcinogen By:
IARC: No NTP: No OSHA: No ACGIH: No OTHER: No

VOC CONTENT: 8.2% BY WEIGHT, 12.9% BY VOLUME, 78.3 G/L

PRODUCT MIXTURE
ORL-RAT LD50: >5 G/KG 7.
SKN-RBT LD50: >5 G/KG 7.
SKIN PRIMARY IRRITATION INDEX: 1.4, MILD IRR. 7.
EYE IRRITANCY TESTING: CAUSES MODERATE IRRITATION. 7.
INHALATION EXPOSURE TO BUTYL CELLUSOVLE PRODUCED SOME EVIDENCE OF CANCER
IN MICE IN A LONG-TERM BIOASSAY, BUT NO EVIDENCE OF CANCER IN MALE RATS AND EQUIVOCAL EVIDENCE IN FEMALE RATS. 5.

ETHYLENE GLYCOL MONOBUTYL ETHER (EGBE)
SKN-RBT (OPEN): 500 MG MILD 3.
EYE-RBT SDT: 100 MG SEVERE 3.
ORL-RAT LD50: 470 MG/KG 3.
SKN-RBT LD50: 220 MG/KG 3.
IHL-RAT LC50: 450 PPM/4H 3.
IHL-RAT TCLO: 100 PPM/6H (6-18D PREG): TER 3.

ALTHOUGH THE LISTED EFFECTS WERE OBSERVED IN LABORATORY ANIMALS UPON INHALATION OF THIS MATERIAL, STUDIES HAVE ALSO SUGGESTED THAT THERE IS LITTLE POSSIBILITY OF SIGNIFICANT ADVERSE HEALTH EFFECTS IN HUMANS EXPOSED IN THE WORKPLACE TO LEVELS THAT COMPLY WITH THE OSHA PERMISSIBLE EXPOSURE LIMIT OF 50 PPM. AT 100 PPM SOME SUBJECTIVE COMPLAINTS WERE SEEN IN SENSITIVE INDIVIDUALS, AND EVEN AT 200 PPM THE PRIMARY COMPLAINT

WAS IRRITATION. THIS APPEARS TO BE ONE OF THE FEW MATERIALS TO WHICH THE HUMAN IS MORE RESISTANT THAN THE USUAL EXPERIMENTAL ANIMALS. 4. INHALATION EXPOSURE TO 2-BUTOXYETHANOL PRODUCED SOME EVIDENCE OF CANCER IN MICE IN A LONG-TERM BIOASSAY, NO EVIDENCE OF CANCER IN MALE RATS AND EQUIVOCAL EVIDENCE IN FEMALE RATS. 5.

NTP HAS FOUND SOME EVIDENCE OF CARCINOGENICITY IN MICE, WITH UNKNOWN RELEVENCE TO HUMANS. 5.

PROPANE
NO TOXICOLOGICAL DATA AVAILABLE

ISOBUTANE
IHL-RAT LC50: 57 PPH/15M 3.

SECTION VII - REACTIVITY DATA

Stability: Stable: X Unstable:

Conditions to Avoid: AVOID HEAT, HOT SURFACES, SPARKS, AND OPEN FLAMES.
Incompatibility (Materials to Avoid):
STRONG OXIDIZING AGENTS SUCH AS CHLORINE BLEACH CONCENTRATED HYDROGEN PEROXIDE; STRONG ACIDS AND BASES.

Hazardous Decomposition Products:
OXIDES OF CARBON; ALDEHYDES, KETONES, AND ORGANIC ACIDS

Hazardous Polymerization:
May Occur: Will Not Occur: X

Conditions to Avoid: N/A

SECTION VIII - SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Released or Spilled:
DUE TO THE NATURE OF THE AEROSOL PACKAGING, A LARGE SPILL IS UNLIKELY. FOR A SMALL SPILL, WEAR APPROPRIATE PROTECTIVE CLOTHING, VENTILATE THE AREA, ABSORB WITH AN INERT MATERIAL AND TRANSFER ALL MATERIAL INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL. USE CARE AS SPILLS MAY BE SLIPPERY.

Waste Disposal Method(s):
DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS.

TYPICAL DISPOSAL IS TO WRAP THE EMPTY AEROSOL CONTAINER IN SEVERAL LAYERS OF NEWSPAPER AND DISPOSE OF IN THE TRASH. AEROSOL RECYCLING PROGRAMS ARE AVAILABLE IN MANY AREAS. DO NOT PUNCTURE OR INCINERATE THIS CONTAINER.

Neutralizing Agent:
N/A

SECTION IX - SPECIAL PROTECTION INFORMATION

Required Ventilation:
LOCAL VENTILATION IS RECOMMENDED TO CONTROL EXPOSURE FROM OPERATIONS THAT CAN GENERATE EXCESSIVE LEVELS OF MISTS OR VAPORS. LOCAL VENTILATION IS PREFERRED, BECAUSE IT PREVENTS DISPERSION INTO WORK AREAS BY CONTROLLING IT AT ITS SOURCE.

Respiratory Protection:
RESPIRATORS SHOULD BE SELECTED BY AND USED UNDER THE DIRECTION OF A TRAINED HEALTH AND SAFETY PROFESSIONAL FOLLOWING REQUIREMENTS FOUND IN OSHA'S RESPIRATOR STANDARD (29 CFR 1910.134) AND ANSI'S STANDARD FOR RESPIRATORY PROTECTION (Z88.2-1992). FOR CONCENTRATIONS ABOVE THE TLV AND/OR PEL BUT LESS THAN 10 TIMES THESE LIMITS, A NIOSH APPROVED HALF-FACEPIECE RESPIRATOR EQUIPPED WITH APPROPRIATE CHEMICAL CARTRIDGES MAY BE USED. FOR CONCENTRATIONS GREATER THAN 10 TIMES THE TLV AND/OR PEL, CONSULT THE NIOSH RESPIRATOR DECISION LOGIC FOUND IN PUBLICATION NO. 87-116 OR ANSI Z88.2-1992.

Glove Protection:
NEOPRENE OR NITRILE RUBBER GLOVES IF REPEATED OR PROLONGED SKIN CONTACT IS LIKELY. ENSURE COMPLIANCE WITH OSHA'S PERSONAL PROTECTIVE EQUIPMENT (PPE) STANDARD FOR HAND PROTECTION, 29 CFR 1910.138.

Eye Protection:
SAFETY GLASSES WITH SIDE SHIELDS IF THE METHOD OF USE PRESENTS THE LIKELIHOOD OF EYE CONTACT. ENSURE COMPLIANCE WITH OSHA'S PERSONAL PROTECTIVE EQUIPMENT (PPE) STANDARD FOR EYE AND FACE PROTECTION, 29 CFR 1910.133.

Other Protection:
WEAR GENERAL-DUTY WORK CLOTHES AND SHOES. A SAFETY SHOWER AND AN EYEWASH STATION SHOULD BE AVAILABLE.

SECTION X - STORAGE AND HANDLING INFORMATION

Storage Temperature: Indoors: X Outdoors: Heated: Refrigerated:

Minimum Temperature: 35°F Maximum Temperature: 120°F

Precautions to be taken in Handling and Storing:
USE WITH CAUTION AROUND HEAT, SPARKS, PILOT LIGHTS, STATIC ELECTRICITY, AND OPEN FLAME.

Other Precautions:
KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT. FOLLOW THE LABEL DIRECTIONS.

SECTION XI - REGULATORY INFORMATION

Chemical Name	CAS Number	Upper % Limit

Those Ingredients listed above are subject to the reporting requirements of 313 of Title III and of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

SECTION XII - REFERENCES

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 2004.
2. OSHA PEL.
3. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, CCINFOWeb, 2004.
4. DISSOLVING THE MYTHS ABOUT EGBE AND HEALTH, CMA, GLYCOL ETHER PANEL, 1989.
5. CHEMICAL MANUFACTURERS ASSOCIATION, NOVEMBER 9, 1998.
6. NATIONAL TOXICOLOGY PROGRAM, 2004.
7. INDEPENDENT TOXICOLOGY TESTING LABORATORY.

ALL THE COMPONENTS OF THIS PRODUCT ARE IN COMPLIANCE WITH THE TOXIC SUBSTANCES CONTROL ACT (TSCA) AND ARE EITHER LISTED ON THE TSCA INVENTORY OR OTHERWISE EXEMPTED FROM LISTING.

IRR:IRRITANT, FLAM/FLAMM:FLAMMABLE, COMB:COMBUSTIBLE, CORR:CORROSIVE CARC:CARCINOGENIC, TOX:TOXIC, N/A:NOT APPLICABLE, N/E:NOT ESTABLISHED, COC: CLEVELAND OPEN CUP, PMCC:PENSKY-MARTIN CLOSED CUP, TCC:TAGLIABUE CLOSED CUP, LEL:LOWER EXPLOSION LIMIT, UEL:UPPER EXPLOSION LIMIT, NFPA:NATIONAL

FIRE PROTECTION ASSOCIATION, IARC:INTERNATIONAL AGENCY FOR THE RESEARCH ON CANCER, NTP:NATIONAL TOXICOLOGY PROGRAM, OSHA:OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, ACGIH:AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS, TLV:THRESHOLD LIMIT VALUE, PEL:PERMISSIBLE EXPOSURE LIMIT, STEL:SHORT-TERM EXPOSURE LIMIT, MLD:MILD, MOD:MODERATE, SEV:SEVERE, MUT:MUTAGENIC, ASPHYX:ASPHYXIANT, PNOS:PARTICLES (INSOLUBLE) NOT OTHERWISE SPECIFIED, SDT:STANDARD DRAIZE TEST, ORL:ORAL, IHL:INHALATION, HMN:HUMAN

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

MANTEK, DIVISION OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use,storage or disposal of the product.

MATERIAL SAFETY DATA SHEET: SUR-SMOOTH

Section I - General Information

(000000-000000- - 4906)

Date of Issue:
5/4/1998 12:00:00 AM

Supercedes:
8/26/1997 12:00:00 AM

Chemical Name & Synonyms:
N/A

Trade Name & Synonyms:
SUR-SMOOTH

Chemical Family:
AMMONIUM POLYPHOSPHATE SOLUTION

Formula is a mixture: [√]

Manufacturer Name:
CERTIFIED LABS, DIV. OF NCH CORP.

Manufacturer Address:
BOX 152170
IRVING, TEXAS 75015

Prepared By:
V FARRAGH/CHEMIST

Product Code Number:
4906

Emergency Phone Number:
800-424-9300

Section II - Hazardous Ingredients

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

Chemical Name (Ingredients)	Hazard	TLV	PEL	STEL	CAS #
PART A--AGGREGATE					
CRYSTALLINE SILICA	CARC. 4.	0.1MG/M3 1	10 MG/M3 2	0.1 MG/M3	14808-60-7
MAGNESIUM OXIDE	NUIS. DUST	10 MG/KG 1	15 MG/KG 2	NOT EST.	1309-48-4
PART B--HARDENER/PRIMER					
AMMONIUM SULFATE	IRRITANT	NOT EST. 1	NOT EST. 2	NOT EST.	7783-20-2

Section IIa - Non-Hazardous Ingredients

(NON-HAZARDOUS INGREDIENT NAMES AND CAS NUMBERS ARE PROTECTED UNDER NJ TRADE)

Secret Registry #: 409363 - 5095P

Section III - Physical Data

Boiling Point (°F): N/A/221

Vapor Pressure (mm Hg): N/A/<1

Vapor Density (Air=1): N/A

pH @ 100% : B5.7-6.2

% Volatile by Volume: A:0,B:40

H_20 Solubility: NIL/COMPLETE

Specific Gravity (H_20=1): A:2.79/B:1.38

Color: A:TAN/B:GREEN

Odor: MIXED:AMMONIA

Clarity: OPAQUE/TRANSPARENT

Evaporation Rate (BuAc=1): N/A

Viscosity: GRANULAR/NONVIS

Section IV - Fire and Explosion Hazard

Flash Point: NON-FLAM

Flammable Limits: N/A

LEL: N/A

Method Used:

UEL: N/A

Aerosol Level (NFPA 30B): N/A

Extinguishing Media:

[√] Foam	[√] Alcohol Foam	[√] CO2
[√] Dry Chemical	[√] Water Spray	[√] Other

NFPA 704 Hazard Rating:

4-Extreme
3-High
2-Moderate
1-Slight
0-Insignificant

Health: 2
Flammability: 0
Instability: 0
Special:

Special Fire Fighting Procedures:
FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE GEAR. EXTINGUISHING MEDIA SHOULD BE CHOSEN BASED ON THE NATURE OF THE SURROUNDING FIRE.

Unusual Fire and Explosion Hazards:
COOL FIRE EXPOSED CONTAINERS OF LIQUID WITH WATER SPRAY TO PREVENT BURSTING.

Section V - Health and Hazard Data

Threshold Limit Value:
NOT ESTABLISHED FOR MIXTURE. SEE SECTION II.

Effects of Overexposure:

Acute: (Short Term Exposure)
EYE CONTACT: AGGREGATE MAY CAUSE MECHANICAL IRRITATION WITH REDNESS AND A BURNING SENSATION. MIST MAY CAUSE IRRITATION WITH REDNESS AND ITCHING. SKIN CONTACT: AGGREGATE MAY CAUSE MILD IRRITATION TO SENSITIVE INDIVIDUALS. INHALATION: EXCESSIVE INHALATION OF AGGREGATE DUST MAY CAUSE RESPIRATORY IRRITATION WITH BREATHLESSNESS, COUGHING AND WHEEZING. MISTS OF HARDENER OR PRIMER MAY CAUSE RESPIRATORY IRRITATION WITH COUGHING OR SNEEZING. INGESTION: LARGE AMOUNTS OF HARDENER OR PRIMER MAY CAUSE DIARRHEA OR EXCESSIVE URINATION.

Chronic: (Long Term Exposure)
REPEATED OR PROLONGED INHALATION EXPOSURE TO SILICON DIOXIDE MAY CAUSE SILICOSIS, A FORM OF PULMONARY (LUNG) FIBROSIS WHICH CAN BE PROGRESSIVE AND MAY LEAD TO DEATH. PROGRESSIVE MASSIVE FIBROSIS MAY BE ACCOMPANIED BY HEART ENLARGEMENT, HEART FAILURE AND PULMONARY FAILURE. SMOKING AGGRAVATES THE EFFECTS OF EXPOSURE. THIS HAZARD IS ONLY A POTENTIAL WHEN HANDLING THE UNMIXED AGGREGATE OR WHEN SANDING THE FINISHED PRODUCT. MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE TO UNMIXED AGGREGATE ARE PRE-EXISTING RESPIRATORY CONDITIONS SUCH AS ASTHMA, EMPHYSEMA, AND BRONCHITIS. TARGET ORGANS: LUNGS.

Primary Routes of Entry

[√] Inhalation	[ ] Ingestion	[ ] Absorption

Emergency First Aid Procedures:

Inhalation:
REMOVE FROM THE AREA TO FRESH AIR. SEEK MEDICAL ATTENTION IF RESPIRATORY IRRITATION DEVELOPS OR IF BREATHING BECOMES DIFFICULT.

Eye Contact:
RINSE THE EYES WITH WATER. REMOVE ANY CONTACT LENSES AND CONTINUE FLUSHING WITH PLENTY OF WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

Skin Contact:
WASH AFFECTED AREAS WITH SOAP AND WATER FOR SEVERAL MINUTES. SEEK MEDICAL ATTENTION IF IRRITATION DEVELOPS.

Ingestion:
GIVE 3 TO 4 GLASSES OF WATER, BUT DO NOT INDUCE VOMITING. IF VOMITING OCCURS, GIVE FLUIDS AGAIN. SEEK MEDICAL ATTENTION IF DISCOMFORT OCCURS.

Notes to Physician:
N/A

Section VI - Toxicity Information

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:

[√] IARC	[ ] NTP	[ ] OSHA	[ ] ACGIH	[ ] Other

CRYSTALLINE SILICA
IHL-HMN TCLO: 16MPPCF/8H/17.9Y-I TFX:PUL 3.
IHL-HMN LCLO: 300 UG/M3/10Y-I 3.
IN EPIDEMIOLOGICAL STUDIES, AN EXCESS IN RESPIRATORY CANCER AND NON-MALIGNANT RESPIRATORY DISEASE MORTALITY WAS OBSERVED IN WORKERS EXPOSED TO FIBROUS (NY) TALC AND EXCESS NON-MALIGNANT RESPIRATORY DISEASE MORTALITY OBSERVED IN THOSE EXPOSED TO NON-FIBROUS (VERMONT) TALC. 4.
AMMONIUM SULFATE
ORL-MAN: TDLO: 1500 MG/ML 3.
ORL-RAT: LD50: 2840 MG/KG 3.
MAGNESIUM OXIDE
INH-HMN TCLO: 400 MG/M3: UNS 3.
ITR-HAM TDLO: 480 MG/KG 30W-I:ETA 3.

Section VII - Reactivity Data

Stability

[√] Stable [ ] Unstable

Conditions to Avoid:
STORAGE IN WET AREAS

Hazardous Polymerization

[√] Will not occur [ ] May occur

Conditions to Avoid:
NONE KNOWN.

Incompatibility (Materials to Avoid):
STRONG OXIDIZERS SUCH AS CHLORINE BLEACH OR PEROXIDES, STRONG ACIDS, ZINC, COPPER. THESE APPLY TO UNCURED MATERIAL ONLY.

Hazardous Decomposition Products:
IF HEATED TO POINT OF DECOMPOSITION, MAY PRODUCE AMMONIA, OXIDES OF PHOSPHOROUS, FUMES OF SILICA.

Section VIII - Spill Or Leak Procedures

Steps to be Taken if Material is Released or Spilled:
SWEEP OR VACUUM UP SPILLS OF AGGREGATE, TAKING CARE NOT TO CREATE DUST. ABSORB LIQUID SPILLS WITH AN INERT MATERIAL AND SCOOP UP. TRANSFER ALL WASTE MATERIAL INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL. WEAR APPROPRIATE PROTECTIVE CLOTHING.

Waste Disposal Method(s):
DISPOSE OF IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.

Neutralizing Agent:
N/A

Section IX - Special Protection Information

Required Ventilation:
GENERAL VENTILATION IS ADEQUATE FOR NORMAL USE OF PRODUCT.

Respiratory Protection:
NOT NORMALLY REQUIRED. USE NIOSH APPROVED DUST MASK IF NEEDED TO PREVENT INHALATION OF DUST WHILE MIXING.

Glove Protection:
IMPERVIOUS RUBBER OR PLASTIC IF REPEATED OR PROLONGED SKIN CONTACT IS LIKELY.

Eye Protection:
SAFETY GLASSES IF METHOD OF APPLICATION PRESENTS THE LIKELIHOOD OF EYE CONTACT.

Other Protection:
WEAR GENERAL DUTY WORK CLOTHING AND SHOES.

Section X - Storage and Handling Information

Storage Temperature

Max: 120°F. Min: 32°F.

Storage Conditions

[√] Indoors [ ] Outdoors [ ] Heated [ ] Refrigerated

Precautions to be Taken in Handling and Storing:
STORE AT MODERATE TEMPERATURES IN CLOSED CONTAIN- ERS. KEEP AGGREGATE DRY AND AVOID CREATING DUST WHEN HANDLING. DO NOT USE ZINC OR COPPER CONTAIN- ERS OR EQUIPMENT. WASH THOROUGHLY AFTER HANDLING.

Other Precautions:
KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THIS PRODUCT.

Section XI - Regulatory Information

Chemical Name	CAS Number	Upper % Limit
None.		

Those Ingredients listed above are subject to the reporting requirements of 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

Please call 1-800-527-9919 for additional information if you are a California customer. This MSDS is not intended for users in the state of California.

Section XII - References

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 1996-1997. 2. OSHA PEL. 3. SAX'S DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, EIGHTH EDITION, ALL OF THE COMPONENTS WITHIN THIS PRODUCT CAN BE FOUND IN THE CURRENT TSCA INVENTORY. IRR:IRRITANT, FLAM/FLAMM:FLAMMABLE, COMB:COMBUSTIBLE, CORR:CORROSIVE CARC:CARCINOGENIC, TOX:TOXIC, N/A:NOT APPLICABLE, N/E:NOT ESTABLISHED, COC:CLEVELAND OPEN CUP, PMCC:PENSKY-MARTIN CLOSED CUP, TCC:TAGLIABUE CLOSED CUP, LEL:LOWER EXPLOSION LIMIT, UEL:UPPER EXPLOSION LIMIT, NFPA:NATIONAL FIRE PROTECTION ASSOCIATION, IARC:INTERNATIONAL AGENCY FOR THE RESEARCH ON CANCER, NTP:NATIONAL TOXICOLOGY PROGRAM, OSHA:OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, ACHGIH:AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS, TLV:THRESHOLD LIMIT VALUE, PEL:PERMISSIBLE EXPOSURE LEVEL, STEL:SHORT-TERM EXPOSURE LIMIT, MLD:MILD, MOD:MODERATE, SEV:SEVERE, MUT:MUTAGENIC, ASPHYX:ASPHYXIANT

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE IN LIGHT OF CURRENT FORMULATION. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

CERTIFIED LABS, DIV. OF NCH CORP. assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such unrecommended use, storage, or disposal of the product.

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Material Safety Data Sheet

Issuing date 14-Oct-2011 **Revision Date** 14-Oct-2011 **Version** 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product name **Swisher Select HD Green Pot & Pan Detergent**

Product code 40361-1
Reference number(s) 40361-5/ 40361-55

Recommended Use Pot & Pan Detergent

Distributor
Swisher Hygiene Inc.
4725 Piedmont Row Drive,
Suite 400,
Charlotte, NC 28210

Chemical Emergency Phone Number 800-424-9300 (Chemtrec)

Company Emergency Phone Number 800-444-4138

2. HAZARDS IDENTIFICATION

Emergency Overview

The product contains no substances which at their given concentration, are considered to be hazardous to health.

Appearance Clear Viscous Liquid **Physical state** liquid. **Odor** Floral

Potential Health Effects
Acute toxicity

Eyes	Irritating to eyes
Skin	Irritating to skin
Inhalation	No known effect based on information supplied
Ingestion	No known effect based on information supplied

Chronic Effects No known effect based on information supplied

Aggravated Medical Conditions None known.

Environmental hazard See Section 12 for additional Ecological Information

3. COMPOSITION/INFORMATION ON INGREDIENTS

This is not believed to be a hazardous material according to current Department of Labor definitions.

4. FIRST AID MEASURES

Eye contact	Flush with flowing water for 15 minutes & see physician.
Skin contact	Wash with water for 15 minutes. See physician if irritation persists.
Inhalation	Move to fresh air
Ingestion	Give milk or water to dilute material; DO NOT induce vomiting. Avoid alcohol. CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY; NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.
Notes to physician	Treat symptomatically

5. FIRE-FIGHTING MEASURES

Flammable Properties	Not flammable
Flash point	none
Suitable Extinguishing Media	Use water spray or fog, foam, dry chemical, carbon dioxide, alcohol foam, if product is involved.
Hazardous Combustion Products	If burned, normal combustion products: Carbon dioxide, Carbon monoxide; Nitrous oxides.
Explosion Data	
Sensitivity to Mechanical Impact	none
Sensitivity to Static Discharge	none
Specific hazards arising from the chemical	Use water spray to cool adjacent fire exposed containers. Product will not burn but may splatter if temperature exceeds boiling point.
Protective Equipment and Precautions for Firefighters	Avoid exposure to fumes or vapors.

NFPA	**Health Hazard** 0	**Flammability** 0	**Stability** 0	**Physical and chemical hazards** -
HMIS	**Health Hazard** 1	**Flammability** 0	**Physical Hazard** 0	**Personal protection** A

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Ensure adequate ventilation
Environmental precautions	Try to prevent the material from entering drains or water courses
Methods for Containment	Prevent further leakage or spillage if safe to do so
Methods for cleaning up	Mop up & flush to sewer with plenty of water. Floors may be slippery. Use care to avoid falls.

7. HANDLING AND STORAGE

Advice on safe handling	KEEP OUT OF REACH OF CHILDREN CAUTION
Technical measures/Storage conditions	Store upright in original closed container.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines Review Section 3 & 4 for Exposure Guidelines.

Engineering Measures Showers
Eyewash stations
Ventilation systems

Personal Protective Equipment Institutional Environment

Eye/Face Protection	Safety glasses are suggested when using this product in heavy use and institutional environments.
Consumer Environments	Care should be taken to avoid Eye contact.
Skin and body protection	Rubber gloves
Respiratory protection	Unnecessary in open institutional enviroment.
Hygiene measures	Practice good personal hygiene. Wash after handling.

Personal Protective Equipment Industrial Environment

Eye/Face Protection	Splash-proof chemical goggles or face shield.
Skin and body protection	Impervious rubber, alkali-proof protecetive gloves Impervious rubber boots & apron.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
Hygiene measures	Practice good personal hygiene. Wash after handling. Shower at end of work period Practice good personal hygiene. Wash after handling

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	liquid		
Appearance	Clear Viscous Liquid	**Odor**	Floral
Color	clear green	**Odor Threshold**	No information available

Property	**Values**	**Remarks Methods**
pH	7.5	No information available
Melting/freezing point		No information available
Freezing Point		No information available
Boiling point/boiling range	212 °F	No information available
Flash Point		No information available
Evaporation rate	GT 1.00	No information available
Flammability (solid, gas)		No information available
Flammability Limits in Air		No information available
upper flammability limit		
lower flammability limit		
Explosion Limits		
upper		
lower		
Vapor pressure	17	No information available
Vapor density	0.62	No information available
Specific Gravity	1.03	No information available
Water solubility	completely soluble	No information available
Solubility in other solvents		No information available
Partition coefficient: n-octanol/water		No information available
Autoignition temperature		No information available
Decomposition temperature		No information available
Viscosity, kinematic		No information available
Viscosity, dynamic		

Explosive properties	No information available
Oxidizing Properties	No information available

9.2 Other information

Softening point	No information available
Molecular Weight	No information available
VOC Content(%)	No information available
Density VALUE	No information available
Bulk Density VALUE	No information available

10. STABILITY AND REACTIVITY

Stability Stable

Incompatible products Strong oxidizing agents

Conditions to Avoid None known based on information supplied

Hazardous Decomposition Products If burned, normal combustion products: Carbon dioxide, Carbon monoxide; Nitrous oxides.

Hazardous Polymerization Hazardous polymerization does not occur

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product Information Product does not present an acute toxicity hazard based on known or supplied information.

Chronic toxicity

Target Organ Effects None known.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements

Contaminated packaging Do not re-use empty containers

14. TRANSPORT INFORMATION

Note	Cleaning Liquid, Not Regulated
Dot	Not regulated
Proper shipping name	Cleaning Liquid, Not Regulated
TDG	Not regulated
MEX	Not regulated
ICAO	Not regulated
ICAO/IATA	Not regulated
IMDG / IMO	Not regulated
RID	Not regulated
ADR/RID	Not regulated
ADN	Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	TSCA
DSL	Complies
NDSL	Complies
EINECS	Complies
ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

U.S. Federal Regulations

SARA 313
Sara Title III (EPCRA) NOTIFICATION: Does not contain chemicals subject of the reporting requirements of Section 302, 304, or 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986.
COMPREHENSIVE ENVIRONMENT RESPONSE, COMPENSATION, AND LIABILITY ACT(CERLA) NOTIFICATION: This does not contain chemical subject to reporting under CERCLA For more information consult 40 CFR parts 302, 355, 370, 372, and 40 CFR part 68.

SARA 311/312 Hazard Categories

Acute Health Hazard	no
Chronic Health Hazard	no
Fire Hazard	no
Sudden Release of Pressure Hazard	no

Reactive Hazard	no

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

International Regulations

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

Prepared By	Swisher Hygiene Inc. 4725 Piedmont Row Drive Suite 400 Charlotte, NC 28210
Issuing date	14-Oct-2011
Revision Date	14-Oct-2011
Revision Note	No information available

Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text

End of Material Safety Data Sheet

SAFETY DATA SHEET

Green Earth Machine Detergent

Section 1. Identification

GHS product identifier : Green Earth Machine Detergent

Other means of identification : Not available.

Product type : Solid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Supplier's details : Betco Corporation
1001 Brown Avenue
Toledo, OH 43607
www.betco.com
888-462-3826

Emergency telephone number (with hours of operation) : Chemtrec 800-424-9300 (24 Hour)

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A

GHS label elements

Hazard pictograms :

Signal word : Warning

Hazard statements : Causes serious eye irritation.
Causes skin irritation.

Precautionary statements

Prevention : Wear protective gloves: 1 - 4 hours (breakthrough time): nitrile rubber. Wear eye or face protection: Recommended: splash goggles. Wash hands thoroughly after handling.

Response : IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Storage : Not applicable.

Disposal : Not applicable.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

CAS number : Not applicable.

Product code : 240

Ingredient name	%	CAS number
sodium carbonate	≥25 - <50	497-19-8
disodium metasilicate	≥10 - <25	6834-92-0

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : No known significant effects or critical hazards.

Skin contact : Causes skin irritation.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : No specific data.

Section 4. First aid measures

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : No specific fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
sulfur oxides
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

Large spill : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles. Recommended: splash goggles

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. 1 - 4 hours (breakthrough time): nitrile rubber

Section 8. Exposure controls/personal protection

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Personal protective equipment (Pictograms) :

Section 9. Physical and chemical properties

Appearance

Physical state : Solid.

Color : Colorless.

Odor : Odorless.

Odor threshold : Not available.

pH : Not applicable.

Melting point : Not available.

Boiling point : Not available.

Flash point : Closed cup: Not applicable. [Product does not sustain combustion.]

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 1.53846

Solubility : Easily soluble in the following materials: hot water.
Partially soluble in the following materials: cold water.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Section 10. Stability and reactivity

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
sodium carbonate	LD50 Oral	Rat	4090 mg/kg	-
disodium metasilicate	LD50 Oral	Rat	1153 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
sodium carbonate	Eyes - Mild irritant	Rabbit	-	0.5 minutes 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 milligrams	-
	Eyes - Severe irritant	Rabbit	-	50 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
disodium metasilicate	Skin - Moderate irritant	Guinea pig	-	24 hours 250 milligrams	-
	Skin - Severe irritant	Human	-	24 hours 250 milligrams	-
	Skin - Severe irritant	Rabbit	-	24 hours 250 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal.
Routes of entry not anticipated: Inhalation.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : No known significant effects or critical hazards.

Skin contact : Causes skin irritation.

Section 11. Toxicological information

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	4618 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
sodium carbonate	Acute EC50 242000 µg/l Fresh water	Algae - Navicula seminulum	96 hours
	Acute LC50 176000 µg/l Fresh water	Crustaceans - Amphipoda	48 hours
	Acute LC50 265000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 300000 µg/l Fresh water	Fish - Lepomis macrochirus	96 hours
disodium metasilicate	Acute EC50 33.53 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 2320 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours

Persistence and degradability

Not available.

Section 12. Ecological information

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	1759	1759	1759	1759	1759	1759
UN proper shipping name	CORROSIVE SOLIDS, N.O.S. (disodium metasilicate)	CORROSIVE SOLIDS, N.O.S. (disodium metasilicate)	CORROSIVE SOLIDS, N.O.S. (disodium metasilicate)	CORROSIVE SOLIDS, N.O.S. (disodium metasilicate)	CORROSIVE SOLIDS, N.O.S. (disodium metasilicate)	CORROSIVE SOLIDS, N.O.S. (disodium metasilicate)
Transport hazard class(es)	8	8	8	8	8	8
Packing group	II	II	II	II	II	II
Environmental hazards	No.	No.	No.	No.	No.	No.
Additional information	-	-	-	**Tunnel code** (E)	-	-

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined
All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
sodium carbonate	≥25 - <50	No.	No.	No.	Yes.	No.
disodium metasilicate	≥10 - <25	No.	No.	No.	Yes.	No.

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : None of the components are listed.

Pennsylvania : None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

National inventory

Australia : All components are listed or exempted.

Canada : All components are listed or exempted.

Section 15. Regulatory information

China	:	All components are listed or exempted.
Europe	:	Not determined.
Japan	:	Not determined.
Malaysia	:	Not determined.
New Zealand	:	All components are listed or exempted.
Philippines	:	All components are listed or exempted.
Republic of Korea	:	All components are listed or exempted.
Taiwan	:	All components are listed or exempted.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		0
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Classification	Justification
Skin Irrit. 2, H315 Eye Irrit. 2A, H319	Calculation method Calculation method

History

Date of printing	:	4/1/2015.
Date of issue/Date of revision	:	4/1/2015.
Date of previous issue	:	No previous validation.
Version	:	1

Section 16. Other information

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET

Green Earth Pot and Pan Detergent

Section 1. Identification

GHS product identifier : Green Earth Pot and Pan Detergent

Other means of identification : Not available.

Product type : Solid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Supplier's details : Betco Corporation
1001 Brown Avenue
Toledo, OH 43607
www.betco.com
888-462-3826

Emergency telephone number (with hours of operation) : Chemtrec 800-424-9300 (24 Hour)

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : ACUTE TOXICITY (oral) - Category 4
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Harmful if swallowed.
Causes serious eye damage.
Causes skin irritation.

Precautionary statements

Prevention : Wear protective gloves: < 1 hour (breakthrough time): disposable vinyl. Wear eye or face protection: Recommended: safety glasses with side-shields. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

Response : IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Storage : Not applicable.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

CAS number : Not applicable.

Product code : 256

Ingredient name	%	CAS number
Benzenesulfonic acid, mono-C10-16-alkyl derivs., sodium salts	≥25 - <49	68081-81-2
Poly(oxy-1,2-ethanediyl), α-sulfo-ω-(dodecyloxy)-, sodium salt (1:1)	≥10 - <12.8	9004-82-4
N-(2-hydroxyethyl)dodecanamide	≥10 - <11	142-78-9
Alcohols, C9-11, ethoxylated	≥10 - <10.7	68439-46-3
N-(2-hydroxyethyl)myristamide	≥5 - <9.6	142-58-5
Ethyl alcohol	≥1 - <3	64-17-5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Inhalation : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : No known significant effects or critical hazards.

Section 4. First aid measures

Skin contact : Causes skin irritation.

Ingestion : Harmful if swallowed.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : No specific fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Ethyl alcohol	**ACGIH TLV (United States, 4/2014).** STEL: 1000 ppm 15 minutes. **OSHA PEL 1989 (United States, 3/1989).** TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 1000 ppm 10 hours. TWA: 1900 mg/m³ 10 hours.

Section 8. Exposure controls/personal protection

	OSHA PEL (United States, 2/2013). TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours.

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead. Recommended: safety glasses with side-shields

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. < 1 hour (breakthrough time): disposable vinyl

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Solid.

Color : Green.

Odor : Floral.

Odor threshold : Not available.

pH : Not applicable.

Melting point : Not available.

Boiling point : Not available.

Flash point : Closed cup: Not applicable. [Product does not sustain combustion.]

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Section 9. Physical and chemical properties

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 0.999

Solubility : Easily soluble in the following materials: cold water and hot water.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Poly(oxy-1,2-ethanediyl), α-sulfo-ω-(dodecyloxy)-, sodium salt (1:1)	LD50 Oral	Rat	1600 mg/kg	-
Alcohols, C9-11, ethoxylated	LD50 Dermal	Rabbit	2 g/kg	-
	LD50 Oral	Rat	1378 mg/kg	-
Ethyl alcohol	LC50 Inhalation Vapor	Rat	124700 mg/m³	4 hours
	LD50 Oral	Rat	7 g/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Poly(oxy-1,2-ethanediyl), α-sulfo-ω-(dodecyloxy)-, sodium salt (1:1)	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Eyes - Severe irritant	Rabbit	-	24 hours 100 microliters	-
	Skin - Moderate irritant	Rabbit	-	24 hours 25 milligrams	-
	Skin - Severe irritant	Rabbit	-	24 hours 500 milligrams	-
Ethyl alcohol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes 100 milligrams	-

Section 11. Toxicological information

	Eyes - Moderate irritant	Rabbit	-	100 microliters	-
	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	400 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Ethyl alcohol	-	1	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Dermal.
Routes of entry not anticipated: Oral, Inhalation.

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : No known significant effects or critical hazards.

Skin contact : Causes skin irritation.

Ingestion : Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

Section 11. Toxicological information

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	322.4 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Poly(oxy-1,2-ethanediyl), α-sulfo-ω-(dodecyloxy)-, sodium salt (1:1)	Acute EC50 3.12 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
N-(2-hydroxyethyl) dodecanamide	Acute LC50 >100000 µg/l Marine water	Crustaceans - Crangon crangon - Larvae	48 hours
Alcohols, C9-11, ethoxylated	Acute EC50 5.36 mg/l Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute EC50 2686 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 8500 µg/l Fresh water	Fish - Pimephales promelas	96 hours
Ethyl alcohol	Acute EC50 17.921 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - Artemia franciscana - Larvae	48 hours
	Acute LC50 42000 µg/l Fresh water	Fish - Oncorhynchus mykiss	4 days
	Chronic NOEC 4.995 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.375 ul/L Fresh water	Fish - Gambusia holbrooki - Larvae	12 weeks

Persistence and degradability

Not available.

Bioaccumulative potential

Section 12. Ecological information

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Alcohols, C9-11, ethoxylated Ethyl alcohol	- -0.35	237 -	low low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-	-
Packing group	-	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.	No.
Additional information	-	-	-	-	-	-

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined

Not determined.

Clean Water Act (CWA) 307: Nickel

Clean Water Act (CWA) 311: sodium hydroxide

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Benzenesulfonic acid, mono-C10-16-alkyl derivs., sodium salts	≥25 - <49	No.	No.	No.	Yes.	No.
Poly(oxy-1,2-ethanediyl), α-sulfo-ω-(dodecyloxy)-, sodium salt (1:1)	≥10 - <12.8	No.	No.	No.	Yes.	No.
N-(2-hydroxyethyl)dodecanamide	≥10 - <11	No.	No.	No.	Yes.	No.
Alcohols, C9-11, ethoxylated	≥10 - <10.7	No.	No.	No.	Yes.	No.
N-(2-hydroxyethyl)myristamide	≥5 - <9.6	No.	No.	No.	Yes.	No.
Ethyl alcohol	≥1 - <3	Yes.	No.	No.	Yes.	No.

State regulations

Massachusetts : The following components are listed: SODIUM SULFATE (SOLUTION); ETHYL ALCOHOL

New York : None of the components are listed.

New Jersey : The following components are listed: ETHYL ALCOHOL; ALCOHOL

Pennsylvania : The following components are listed: SODIUM SULFATE (SOLUTION); DENATURED ALCOHOL

California Prop. 65

WARNING: This product contains less than 0.1% of a chemical known to the State of California to cause cancer.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Nickel	Yes.	No.	No.	No.

International regulations

Section 15. Regulatory information

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

National inventory

Australia	:	Not determined.
Canada	:	Not determined.
China	:	Not determined.
Europe	:	Not determined.
Japan	:	Not determined.
Malaysia	:	Not determined.
New Zealand	:	Not determined.
Philippines	:	Not determined.
Republic of Korea	:	Not determined.
Taiwan	:	Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		0
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

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Section 16. Other information

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Classification	Justification
Acute Tox. 4, H302	Calculation method
Skin Irrit. 2, H315	Calculation method
Eye Dam. 1, H318	Calculation method

History

Date of printing : 4/1/2015.

Date of issue/Date of revision : 4/1/2015.

Date of previous issue : No previous validation.

Version : 1

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET

High Temp Rinse Aide 325

Section 1. Identification

GHS product identifier : High Temp Rinse Aide 325

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Supplier's details : Betco Corporation
1001 Brown Avenue
Toledo, OH 43607
www.betco.com
888-462-3826

Emergency telephone number (with hours of operation) : Chemtrec 800-424-9300 (24 Hour)

Section 2. Hazards identification

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture : Not classified.

GHS label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

CAS number : Not applicable.

Product code : 242

Ingredient name	%	CAS number
sodium 1,4-dihexyl sulphonatosuccinate	≥1 - <3	3006-15-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Section 3. Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
sulfur oxides
metal oxide/oxides

Section 5. Fire-fighting measures

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8).

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. Recommended: safety glasses

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. < 1 hour (breakthrough time): disposable vinyl

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Personal protective equipment (Pictograms) :

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Clear. Blue.

Odor : Odorless.

Odor threshold : Not available.

pH : 8.3 to 8.4

Melting point : Not available.

Boiling point : Not available.

Flash point : Closed cup: Not applicable. [Product does not sustain combustion.]

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Section 9. Physical and chemical properties

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 1.0068

Solubility : Easily soluble in the following materials: cold water and hot water.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
sodium 1,4-dihexyl sulphonatosuccinate	LD50 Oral	Rat	1750 mg/kg	-

Irritation/Corrosion

Not available.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Section 11. Toxicological information

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral.
Routes of entry not anticipated: Dermal, Inhalation.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : No specific data.

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	72916.7 mg/kg

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-	-
Packing group	-	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.	No.
Additional information	-	-	-	-	-	-

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 14. Transport information

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: Not determined

Not determined.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Not applicable.

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
sodium 1,4-dihexyl sulphonatosuccinate	≥1 - <3	No.	No.	No.	Yes.	No.

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : None of the components are listed.

Pennsylvania : None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Section 15. Regulatory information

International lists

National inventory

Australia	:	Not determined.
Canada	:	Not determined.
China	:	Not determined.
Europe	:	Not determined.
Japan	:	Not determined.
Malaysia	:	Not determined.
New Zealand	:	Not determined.
Philippines	:	Not determined.
Republic of Korea	:	Not determined.
Taiwan	:	Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	1
Flammability	0
Physical hazards	0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Classification	Justification
Not classified.	

History

Date of printing	:	4/1/2015.
Date of issue/Date of revision	:	4/1/2015.
Date of previous issue	:	No previous validation.
Version	:	1

Section 16. Other information

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET

Betco Symplicity Sanibet Multi-Range

Section 1. Identification

GHS product identifier : Betco Symplicity Sanibet Multi-Range

Other means of identification : Not available.

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Not applicable.

Supplier's details : Betco Corporation
1001 Brown Avenue
Toledo, OH 43607
www.betco.com
888-462-3826

Emergency telephone number (with hours of operation) : Chemtrec 800-424-9300 (24 Hour)

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of nonpesticide chemicals. Please read complete product label.

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 4
SKIN CORROSION/IRRITATION - Category 1B
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
CARCINOGENICITY - Category 1B

GHS label elements

Hazard pictograms :

Signal word : Warning (Per OSHA). DANGER (Per EPA).

Hazard statements : Combustible liquid (Per OSHA). Causes irreversible eye damage and skin burns (Per EPA). Harmful if swallowed or absorbed through the skin (Per EPA).

Precautionary statements

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves: 1 - 4 hours (breakthrough time): disposable vinyl. Wear eye or face protection: Recommended: splash goggles. Wear protective clothing. Keep away from flames and hot surfaces. - No smoking. Wash hands thoroughly after handling.

Response : IF exposed or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Section 2. Hazards identification

Storage : Store locked up. Store in a well-ventilated place. Keep cool.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

CAS number : Not applicable.

Product code : 237

Ingredient name	%	CAS number
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	≥3 - <5	68424-85-1
decyldimethyloctylammonium chloride	≥3 - <5	32426-11-2
didecyldimethylammonium chloride	≥1 - <3	7173-51-5
Ethyl alcohol	≥1 - <3	64-17-5
dimethyldioctylammonium chloride	≥1 - <3	5538-94-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Inhalation : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

Section 4. First aid measures

Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards (Per OSHA). Causes irreversible eye damage (Per EPA).

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards (Per OSHA). Causes skin burns (Per EPA). Harmful if absorbed through skin (Per EPA).

Ingestion : No known significant effects or critical hazards (Per OSHA). Harmful if swallowed (Per EPA).

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds
metal oxide/oxides

Section 5. Fire-fighting measures

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Ethyl alcohol	**ACGIH TLV (United States, 4/2014).** STEL: 1000 ppm 15 minutes. **OSHA PEL 1989 (United States, 3/1989).** TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours. **NIOSH REL (United States, 10/2013).** TWA: 1000 ppm 10 hours. TWA: 1900 mg/m³ 10 hours. **OSHA PEL (United States, 2/2013).** TWA: 1000 ppm 8 hours. TWA: 1900 mg/m³ 8 hours.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead. Recommended: splash goggles

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. 1 - 4 hours (breakthrough time): disposable vinyl

Section 8. Exposure controls/personal protection

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Personal protective equipment (Pictograms) :

Section 9. Physical and chemical properties

Appearance

Physical state : Liquid.

Color : Clear. Red.-pink

Odor : Mild. Sweetish.

Odor threshold : Not available.

pH : 6 to 9

Melting point : Not available.

Boiling point : Not available.

Flash point : Closed cup: >65°C (>149°F) [Product does not sustain combustion.]

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : 0.98

Solubility : Easily soluble in the following materials: cold water and hot water.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Incompatible materials : Reactive or incompatible with the following materials:
oxidizing materials

Section 10. Stability and reactivity

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	LD50 Oral	Rat	426 mg/kg	-
didecyldimethylammonium chloride	LD50 Oral	Rat	84 mg/kg	-
Ethyl alcohol	LC50 Inhalation Vapor	Rat	124700 mg/m³	4 hours
	LD50 Oral	Rat	7 g/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	Skin - Severe irritant	Rabbit	-	25 milligrams	-
didecyldimethylammonium chloride	Skin - Severe irritant	Rabbit	-	500 milligrams	-
Ethyl alcohol	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes 100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	100 microliters	-
	Eyes - Severe irritant	Rabbit	-	500 milligrams	-
	Skin - Mild irritant	Rabbit	-	400 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Ethyl alcohol	-	1	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Section 11. Toxicological information

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact : No known significant effects or critical hazards (Per OSHA). Causes irreversible eye damage (Per EPA).

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards (Per OSHA). Causes skin burns (Per EPA). Harmful if absorbed through skin (Per EPA).

Ingestion : No known significant effects or critical hazards (Per OSHA). Harmful if swallowed (Per EPA).

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur

Ingestion : Adverse symptoms may include the following:
stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Section 11. Toxicological information

Route	ATE value
Oral	5621.2 mg/kg
Dermal	7142.9 mg/kg
Inhalation (vapors)	611.1 mg/l

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	Acute EC50 670 µg/l Fresh water	Algae - Chlorella pyrenoidosa - Exponential growth phase	96 hours
	Acute EC50 5.9 ppb Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 64 ppb Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 4.15 ppb Marine water	Daphnia - Daphnia magna	21 days
	Chronic NOEC 32.2 ppb	Fish - Pimephales promelas	34 days
didecyldimethylammonium chloride	Acute EC50 110 µg/l Fresh water	Algae - Chlorella pyrenoidosa - Exponential growth phase	72 hours
	Acute EC50 14.22 ppb Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 18 ppb Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 39 µg/l Marine water	Crustaceans - Americamysis bahia - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 0.01 µg/l Fresh water	Fish - Acipenser transmontanus - Larvae	96 hours
	Chronic NOEC 25 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Chronic NOEC 125 µg/l Fresh water	Daphnia - Daphnia magna	21 days
Ethyl alcohol	Acute EC50 17.921 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - Artemia franciscana - Larvae	48 hours
	Acute LC50 42000 µg/l Fresh water	Fish - Oncorhynchus mykiss	4 days
	Chronic NOEC 4.995 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.375 ul/L Fresh water	Fish - Gambusia holbrooki - Larvae	12 weeks
dimethyldioctylammonium chloride	Acute EC50 0.1 ppm Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 0.7 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Ethyl alcohol	-0.35	-	low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Section 12. Ecological information

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	1903	1903	1903	1903	1903	1903
UN proper shipping name	Disinfectant, Liquid, Corrosive N.O.S. (Dialkyldimethylammonium Chloride)	Disinfectant, Liquid, Corrosive N.O.S. (Dialkyldimethylammonium Chloride)	Disinfectant, Liquid, Corrosive N.O.S. (Dialkyldimethylammonium Chloride)	Disinfectant, Liquid, Corrosive N.O.S. (Dialkyldimethylammonium Chloride)	Disinfectant, Liquid, Corrosive N.O.S. (Dialkyldimethylammonium Chloride)	Disinfectant, Liquid, Corrosive N.O.S. (Dialkyldimethylammonium Chloride)
Transport hazard class(es)	8	8	8	8	8	8
Packing group	III	III	III	III	III	III
Environmental hazards	No.	No.	No.	Yes.	Yes.	No.
Additional information	**Limited quantity** Yes.	**Explosive Limit and Limited Quantity Index** 5	-	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.	The environmentally hazardous substance mark may appear if required by other transportation regulations.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 14. Transport information

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 4(a) proposed test rules**: Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Fire hazard
Immediate (acute) health hazard
Delayed (chronic) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides	≥3 - <5	No.	No.	No.	Yes.	No.
decyldimethyloctylammonium chloride	≥3 - <5	No.	No.	No.	Yes.	Yes.
didecyldimethylammonium chloride	≥1 - <3	No.	No.	No.	Yes.	No.
Ethyl alcohol	≥1 - <3	Yes.	No.	No.	Yes.	No.
dimethyldioctylammonium chloride	≥1 - <3	No.	No.	No.	Yes.	Yes.

State regulations

Massachusetts : The following components are listed: ETHYL ALCOHOL

New York : None of the components are listed.

New Jersey : The following components are listed: ETHYL ALCOHOL; ALCOHOL

Pennsylvania : The following components are listed: DENATURED ALCOHOL

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Section 15. Regulatory information

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists

National inventory

Australia	:	Not determined.
Canada	:	All components are listed or exempted.
China	:	All components are listed or exempted.
Europe	:	All components are listed or exempted.
Japan	:	Not determined.
Malaysia	:	Not determined.
New Zealand	:	All components are listed or exempted.
Philippines	:	All components are listed or exempted.
Republic of Korea	:	All components are listed or exempted.
Taiwan	:	All components are listed or exempted.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	2
Flammability		2
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910. 1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Reprinted with permission from NFPA 704-2001, Identification of the Hazards of Materials for Emergency Response Copyright ©1997, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the National Fire Protection Association, on the referenced subject which is represented only by the standard in its entirety.

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Section 16. Other information

Classification	Justification
Flam. Liq. 4, H227	On basis of test data
Skin Corr. 1B, H314	Calculation method
Eye Dam. 1, H318	Calculation method
Carc. 1B, H350	Calculation method

History

Date of printing : 4/13/2015.

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Date of previous issue : 3/31/2015.

Version : 2

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND DISTRIBUTOR'S INFORMATION

NFPA Rating: Health-2; Flammability-2; Reactivity-0; Special-0

HMIS Rating: Health-2; Flammability-2; Reactivity-0; Personal Protection-B

Manufactured For: Lagasse Brothers, Inc.
Address: 1525 Kuebel Street
Address: New Orleans, LA 70123
Phone: 800-989-7487
Emergency Response Number: 1-800-255-3924
NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA

DOT Hazard Classification: ORM-D
Identity (trade name as used on label): System Clean Furniture Polish/ SYC53200
MSDS Number: A00136 Revision- 3
Date Prepared: 04/12/93 Prepared By: ES/KD
Information Calls: (770)422-2071

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
PETROLEUM DISTILLATE	8052-41-3	No	100	100	d
ISOBUTANE / PROPANE BLEND	75-28-5	No	800	800	d
	74-98-6	No	1000	1000	d

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: N/A
Vapor Pressure: PSIG @ 70°F (Aerosols): Max.80
Vapor Density (Air = 1): N/E
Solubility in Water: Partial
Appearance and Odor: Cream color, with lemon fragrance.

Specific Gravity (H2O=1): Concentrate Only = 0.980
Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A
Evaporation Rate (= 1): N/E
Water Reactive: No

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols) 12-16 inch Flame Extension

Auto Ignition Temperature N/E

Flammability Limits in Air by % in Volume: % LEL: N/E % UEL: N/E

FLASH POINT AND METHOD USED (non-aerosols): N/A

EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide, water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus.

Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture.

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY [X] STABLE [ ] UNSTABLE

HAZARDOUS POLYMERIZATION [ ] WILL [X] WILL NOT OCCUR

Incompatibility (Mat. to avoid): Strong oxidizers.

Conditions to Avoid: Open flame, welding arcs, heat, sparks.

Hazardous Decomposition Products: CO, CO2.

SECTION 5 - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: [X] INHALATION [ ] INGESTION [X] SKIN ABSORPTION [ ] EYE [ ] NOT HAZARDOUS

ACUTE EFFECTS:

Inhalation: Excessive inhalation of vapors can be harmful and may cause headache, dizziness, asphyxia, anesthetic effects and possible unconsciousness.

Eye Contact: Slight irritation.

Skin Contact: Slight irritation.

Ingestion: Possible chemical pneumonitis if aspirated into lungs. Nausea.

CHRONIC EFFECTS: (Effects due to excessive exposure to the raw materials of this mixture) Petroleum distillate has caused kidney injury in laboratory animals. Stomach and intestine irritant.

Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions.

EMERGENCY FIRST AID PROCEDURES

Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention.
Skin Contact: Wash with soap and water. If irritated, seek medical attention.
Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.
Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by U.S. Bureau of Mines for organic vapor.

Protective Gloves: Latex, if skin easily irritated.

Eye Protection: Safety glasses recommended.

Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.

Other Protective Clothing & Equipment: None

Hygienic Work Practices: Wash with soap and water before handling food. Remove contaminated clothing.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken If Material Is Spilled Or Released: Absorb with suitable medium. Incinerate or landfill according to local, state or federal regulations. DO NOT FLUSH TO SEWER.

Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.

Precautions To Be Taken In Handling & Storage: Do not puncture or incinerate containers. Do not store at temperatures above 130°F.

Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN. Avoid food contamination. Avoid breathing vapors. Remove ignition sources.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

** Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only

THIS MSDS IS CURRENT AS OF March 18, 2001. The DATE PREPARED section is the original date assembled and remains current until a change is necessary. This is tracked internally at the manufacturer by these date codes and therefore must remain as the originating date.